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## TEACHING OF SOCIAL MEDICINE IN LIBERAL ARTS COLLEGES AND UNIVERSITIES <sup>1</sup>

By JOSEPH HIRSH, *Assistant Health Education Specialist*, and ELIZABETH G. PRITCHARD, *Associate Health Education Specialist, United States Public Health Service*

### INTRODUCTION

Since current public health and medical problems have their roots in the evolutionary changes which have occurred in many and diverse fields of thought and action, the term "social medicine" has been adopted to designate a total concept of the social, economic, and psychological problems which affect the health of man. It does not refer to the loosely used and little understood term "socialized medicine," which is popularly understood to mean methods of providing medical services, and as most commonly used, one method, namely state medicine. As used in this study, "social medicine" refers to the economic, social, and psychological problems of public health and medical care, including collective attempts to solve them through public health legislation, tax-supported medical care, voluntary and compulsory health insurance; medical institutions and organizations; and the history of public health and medicine in relation to society.

For centuries, these areas and their interrelationships have been the concern of the professions and of nonprofessional groups. In recent years, however, the growth and accentuation of problems relating to the costs and distribution of public health and medical services have served to intensify that concern. In many fields of endeavor, there has emerged a greater recognition that such diverse problems cannot be stated, explored, or solved as isolated biological, economic, medical, political, or social problems.

<sup>1</sup> Grateful acknowledgment is made to Helen Edelin Crouch for her cooperation in the preparation of data for this study.

Educators have come to realize the importance of these and related issues and have made some attempt to introduce them into the curricula of secondary schools, colleges, and universities. Recognition of this need is especially noteworthy among teachers in the professional schools, who more than others are faced with the real consideration of preparing students to cope with practical problems in a practical world. For example, Dr. F. C. Zapffe, Secretary of the Association of American Medical Colleges, says that medicine—calls for a good education in arts, in the humanities, in the classics, in philosophy. Why do medical educators now insist on economics, sociology, genetics, psychology, philosophy, and mathematics, rather than on more science? Because the physician must be familiar with these subjects if he is to be a true physician. He must know people; understand them; be able to solve many of their problems. Treating a patient for his physical ailment is not all of his problem. There is much more to treat; the man must be treated. To do that calls for a very high type of fundamental education besides some knowledge of science.<sup>2</sup>

Conversely, other professions, particularly those concerned with social service, should have a proper understanding of medicine and public health, and of their relation to the general problems of society. The provision of such training is based on the thesis that it will fit the student for humane and effective professional work, as well as for wise and useful citizenship.

#### PURPOSE

In order to see how liberal arts colleges and universities are preparing students to cope with current individual and social problems in health, the present study was initiated to determine the extent to which courses in social medicine are offered, the content of the courses, and the relative emphasis given them in various departments of the college. Since social medicine touches upon almost every problem of contemporary society, it is believed that the data of this study may also throw some light on the ways in which the college is preparing students for effective citizenship.

#### SAMPLE

Without any attempt at an exact definition, the liberal arts college may be described as an institution giving four years of nonprofessional training beyond the secondary school level. Its chief aims have been described variously,<sup>3</sup> but it may be said in a general way that its purpose is twofold: (1) To prepare students, through general education, for intelligent individual and social living, and (2) to serve as an agency for professional school recruitment.

<sup>2</sup> Zapffe, F. C.; *The Relation Between General Education and Medical Education*. National Society for Study of Education. 38th Yearbook, Part II, General Education in the American College. Public School Publishing Company, Bloomington, Ill., 1939.

<sup>3</sup> Russell, J. D.; *General Education in the Liberal Arts Colleges*. National Society for the Study of Education. 38th Yearbook, Part II, General Education in the American College. Public School Publishing Company, Bloomington, Ill., 1939.

In collaboration with the Division of Higher Education of the United States Office of Education, 230 liberal arts colleges and universities were chosen to which a questionnaire might be directed. These institutions were taken from the 1940 directory <sup>4</sup> of the United States Office of Education.

The sample comprises more than 34 percent of the colleges and universities in this country.<sup>5</sup> Small colleges were selected along with large universities, private institutions, with governmentally owned and operated institutions. Every State in the Union is represented, but because the greatest number of schools are located in the northeastern section of the United States, most of the institutions represented in this study were chosen from this region. (See fig. 1.)

The majority of accredited schools <sup>6</sup> are included in the sample. Two hundred and twenty-three institutions, or 97 percent, have been accredited either by the national or by a regional association. Two were provisionally accredited, accredited with some reservation, or admitted on probation, and 5 were not accredited. It is interesting to note that 192 institutions out of the total sample, or 83 percent, have been accredited by both national and regional associations.

#### METHOD

A questionnaire was directed to deans of the undergraduate and graduate faculties (exclusive of departments and faculties of public health, medicine, and hygiene <sup>7</sup>) of liberal arts colleges and universities,<sup>8</sup> to registrars, to the chairmen and professors of various departments, and to other executive or administrative officers. The following information was sought.

1. Are any courses or parts of courses devoted to the following subjects:
  - a. The economic, social, and psychological problems of public health and medical care?
  - b. Collective attempts to solve these problems (public health legislation and tax-supported medical care, voluntary and compulsory health insurance)?
  - c. The history of medicine and public health in relation to society?
2. Full courses offered:
  - a. Name of course.
  - b. Subject matter listed under 1, a to c, covered.
  - c. Department or faculty in which given.
  - d. Quarter, semester, or full year.
  - e. Undergraduate or graduate.

<sup>4</sup> Educational Directory 1940. Part III, Colleges and Universities. Bulletin 1940, No. 1. U. S. Office of Education, Washington, 1939.

<sup>5</sup> This does not include professional schools, teachers colleges, normal schools, junior colleges, and the like.

<sup>6</sup> Cf. Educational Directory 1940, also Accredited Higher Institutions, published by U. S. Office of Education, for the method and significance of accrediting.

<sup>7</sup> Those courses in hygiene, given in the physical education department or other departments and forming an integral part of the liberal arts curriculum, are included. The exclusion refers to those courses given in professional schools of hygiene.

<sup>8</sup> By agreement, the names of these institutions are not mentioned in this report.

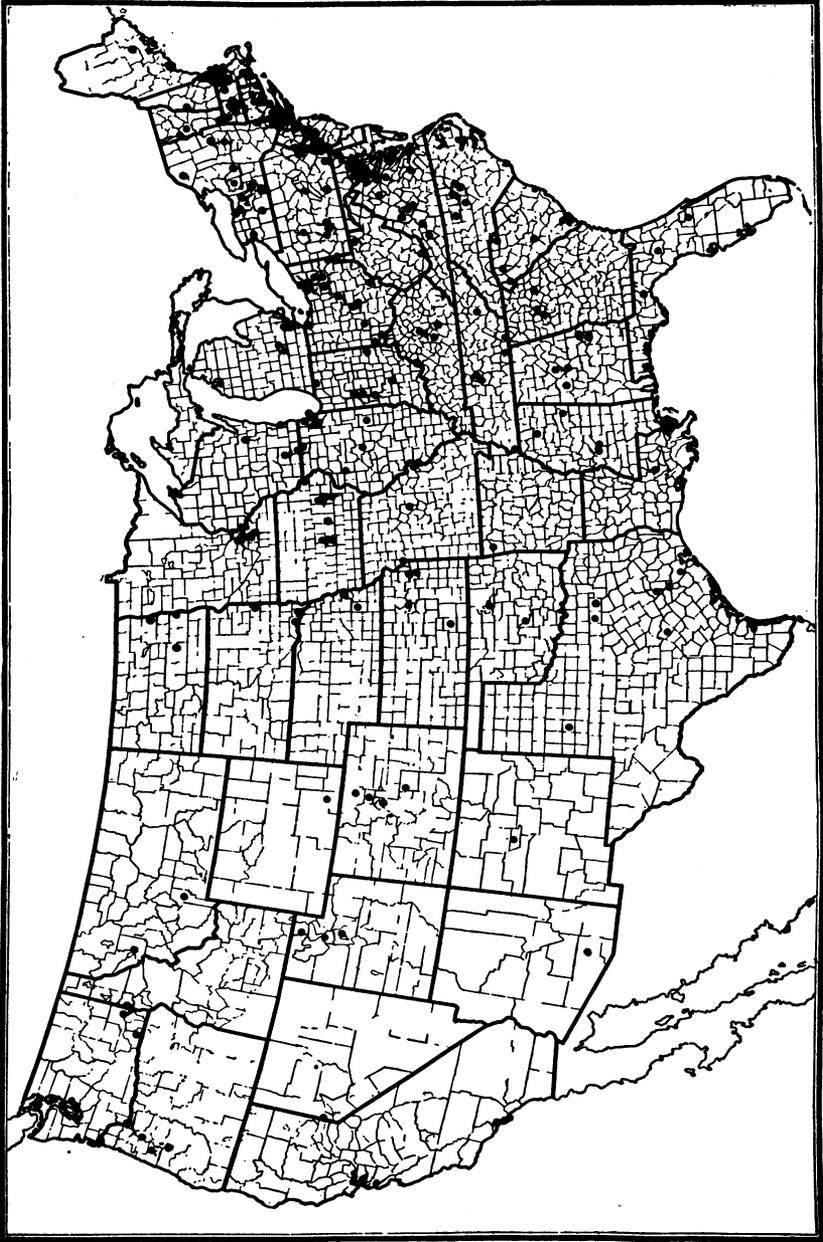


FIGURE 1.—Geographic distribution of colleges and universities to which the questionnaire was sent.

### 3. Parts of courses offered:

- a. Name of course.
- b. Subject matter listed under 1, a to c, covered.
- c. Hours devoted to this subject matter.....
- d. Department or faculty in which given.
- e. Quarter, semester, or full year.
- f. Undergraduate or graduate.

Before sending the questionnaire, the 1939-40 catalogs of the institutions were studied for descriptions of courses and parts of courses that might be devoted to the general subject of social medicine. To this body of data were added the replies to the questionnaires. A final check of the catalogs was then made in order to determine whether the courses described qualified for consideration in this study.

#### GENERAL FINDINGS

Of the 230 colleges and universities which were canvassed, 177, or 77 percent, replied.<sup>9</sup> One hundred and thirty-nine, or 78.5 percent, of the responding institutions stated that one or more full or part courses in social medicine were offered. Three of these schools also encouraged special work in the field, i. e., discussion groups and medical economics research projects. Thirty-six schools, or more than 20 percent of the responding institutions, stated that no consideration was given to the subject. Two schools, although not offering courses on social medicine during 1939-40, reported that they were taking on instructors to give courses in the field during the 1940-41 school year. A letter from a professor in one of these schools stated: "It is impossible to teach modern public health without teaching economic and social problems."

A total of 715 courses covering one or more topics on social medicine was offered by 139 colleges and universities. One hundred and twelve of these were full courses devoted to social medicine subject-matter, and in the remaining 603, similar topics were taught only in parts of the course.

The 112 courses devoting more than incidental interest to the subject, i. e., full courses offered per semester, quarter, or year, were offered in only 63 institutions, or 35 percent of the schools which responded to the questionnaire. Moreover, 256, or 42 percent, of the 603 additional courses which devoted part time to the subject-matter mentioned in the questionnaire, were given in the same group of 63 schools reporting the total number of full courses. In other words, the major effort of formal teaching in the content of social medicine (100 percent of the full courses and 42 percent of the parts

<sup>9</sup> Nineteen additional replies were received after the analysis of data was already under way. Hence they have not been included in this study.

of courses) was concentrated in slightly more than one-third (35 percent) of the responding institutions. This fact would indicate more than any other measure at our disposal the extent to which these subjects are being taught in colleges and universities in the United States.

#### FULL COURSES IN SOCIAL MEDICINE

As used in this study, the term "full course" refers to any course given per quarter, semester, or year which is devoted *entirely* to one or more aspects of social medicine as listed in the questionnaire under 1, *a* to *c*. Depending largely upon the department in which the full course is given, emphasis on the particular subjects varies. Irrespective of departments, however, all full courses to a greater or lesser degree cover the various subjects under 1, *a* to *c*.

Table 1 analyzes the 112 full courses on social medicine according to the departmental framework in which they are given and according to the students eligible to take them. Courses open to undergraduate students only, 62 in number, predominate. Three-fourths of the undergraduate courses, interestingly enough, are given in the biological sciences and in physical education and hygiene.

TABLE 1.—An analysis of full courses on any of the several aspects of social medicine given at 63 colleges and universities, by department, for undergraduates, graduates, and both

Number of courses	Department in which given	Under-graduate	Graduate	Both
20	Biological sciences <sup>1</sup> .....	13	3	4
0	Economics.....	0	0	0
6	Education <sup>2</sup> .....	3	0	3
1	Government and political science <sup>3</sup> .....	1	0	0
0	History.....	0	0	0
1	Home economics.....	1	0	0
38	Physical education and hygiene <sup>4</sup> .....	34	0	4
2	Psychology.....	1	0	1
27	Social work <sup>5</sup> .....	2	17	8
13	Sociology <sup>6</sup> .....	4	5	4
4	Other.....	3	0	1
112		62	25	25

<sup>1</sup> Includes those departments in the colleges and universities which are listed variously as bacteriology, biology, botany, medicine, physiology, preventive medicine, public health, sanitation, science, and zoology.

<sup>2</sup> Includes also health education.

<sup>3</sup> Includes also public administration.

<sup>4</sup> Includes also health.

<sup>5</sup> Includes also applied social science, applied social welfare, public welfare administration, social administration, and social welfare.

<sup>6</sup> Includes also social science.

Twenty-five of the full courses are open to both undergraduates and graduates, and another 25 are given only for graduate students. More than half of the graduate courses are given in social work and, for the most part, should be considered preparatory for professional work in that field.

More than 87 percent of the full courses are given in four major departments: Biological sciences, physical education and hygiene,

social work, and sociology. One-third of the courses, in fact, are given in physical education and hygiene. This predominance is not surprising since a great many colleges and universities require students seeking a liberal arts degree to take one or more courses in this division. In fact, according to a study of the United States Office of Education,<sup>10</sup> 22 percent of all colleges and universities in the United States report a required course in personal or community hygiene.

As previously stated, those courses on social medicine given in the division of social work are of a professional character. Most of the courses called "medical information" or the like are intended primarily for students who will become social workers or medical social workers. In a sense, the social worker is the technician of the social sciences; hence, his training must be practical. To a large extent, the courses in social medicine given in the division of social work exhibit this character. Comprising basic principles, they have little of the theoretical and much of the practical.

The courses on social medicine offered in the biological sciences range from the theoretical to the practical; most of them include laboratory and field instruction, in addition to the traditional lectures. Like instruction in the division of sociology, the biological science courses cover the general field. The differences, as we pointed out earlier, are of emphasis only.

As shown in table 1, the absence of courses on social medicine in departments of economics is striking. This lack is all the more conspicuous when one considers the vast literature<sup>11</sup> on the costs of medical care; the economic consequences of accidents, disability, and death; the distribution of medical facilities and personnel and their money values; the relationship of poverty and disease, housing and health; health insurance and workmen's compensation; and numerous other subjects that are relevant to the teaching of economics. These topics are taught only to a limited extent even in parts of courses, as is shown in the following sections.

It is equally surprising to find only one course offered in the division of government and political science. As in the medical-economic literature, there is a vast array of information that can be taught properly in this division and that is covered partially in parts of courses. The administration of public health and public medical services on the Federal, State, and local levels, and the historical and administrative aspects of compulsory and voluntary health insurance systems are but a few of the subjects that would fall within the sphere of this division's work.

<sup>10</sup> Rogers, J. F.: Instruction in Hygiene in Institutions of Higher Education. Bulletin 1936, No. 7, U. S. Office of Education, Washington, 1936.

<sup>11</sup> A select bibliography has been compiled by the Informational Section, Division of Sanitary Reports and Statistics, U. S. Public Health Service, and is intended as a guide to those interested in the literature.

In the United States, Professors Sarton of Harvard and Sigerist of Johns Hopkins have long advocated the need for teaching the history of science, medicine, and public health. They conceive of such courses not merely as ends in themselves but also in their relationship with other courses and disciplines. In general, they agree on the thesis implicit in this study and stated specifically elsewhere<sup>12</sup> that these historical courses must show the interrelationships of science, public health, and medicine with society. Table 1 shows that not a single institution devotes a full course to these subjects.

Home economics is, comparatively speaking, a newcomer among liberal arts disciplines. Its boundaries and the scope of its courses are still undefined. Many courses, however, deal with practical, everyday problems that affect home life. What could approximate more closely such practical considerations as the costs of medical care; methods of choosing a physician, dentist, nurse, or a hospital; medical resources available in the community; and legislative attempts proposed to solve the problems of medical care? Yet only one full course is devoted to these subjects.

Finally, we come to the departments of psychology, in which only two full courses were reported. Recognition of the relation between mental conditions and physical well-being and efficiency is only just emerging as a well-defined concept in medicine, public health, and social work. The mental hygiene movement is only a quarter of a century old, and, more significantly, the newer contributions of psychiatry and mental hygiene have scarcely touched education at any level. There is, nevertheless, a sufficient body of material and a great enough need to warrant more teaching in these fields. Moreover, the problem of mental disorder in modern society, the care of the mentally ill and handicapped, and the amelioration of individual and group problems through psychotherapy are old stories.

The number of courses reported by departments of education is negligible, both in full courses and in parts of courses. Only 14 courses, 6 full and 8 part, were reported.

#### PARTS OF COURSES DEVOTED TO SOCIAL MEDICINE

More than 1,000 courses devoting one or more lectures to any of the several aspects of social medicine were reported in replies to the questionnaire. Because a number of these "treated the subjects incidentally," it became obvious that some index would have to be set up for defining and considering a course as one which covers the subject matter of social medicine in part. It was decided, therefore, to include only those courses, henceforth referred to as parts of courses,

<sup>12</sup> Sand, R.; *Health and Human Progress*. Macmillan, New York, 1936.

which devoted 3 or more lectures to social medicine per quarter or semester, and 6 or more lectures per year. On this basis, more than 400 courses were excluded, leaving 603 parts of courses for consideration.

Table 2 analyzes these courses according to the departmental framework in which they are given and in terms of the students eligible to take them. Like full courses, the parts of courses on social medicine are predominantly undergraduate. Three hundred and ninety-seven are offered for this group. Only 89 are wholly graduate courses, and more than half of these are offered in the division of social work. One hundred and seventeen are open to both undergraduate and graduate students.

TABLE 2.—*An analysis of parts of courses on any of the several aspects of social medicine given at 133 colleges and universities, by department, for undergraduates, graduates, and both*

Number of courses	Department in which given	Under-graduate	Graduate	Both
60	Biological sciences <sup>1</sup> .....	50	2	8
80	Economics .....	51	8	21
8	Education <sup>2</sup> .....	5	0	3
41	Government and political science <sup>3</sup> .....	29	1	11
10	History .....	8	0	2
7	Home economics .....	6	0	1
67	Physical education and hygiene <sup>4</sup> .....	51	13	3
36	Psychology .....	26	4	6
71	Social work <sup>5</sup> .....	12	49	10
211	Sociology <sup>6</sup> .....	151	12	48
12	Other .....	8	0	4
603		397	89	117

1 2 3 4 5 6 See footnotes to table 1.

Sixty-eight percent of the parts of courses was given in the four departments which absorbed 87 percent of the full courses, namely, biological sciences, physical education and hygiene, social work, and sociology. Three other departments (economics, government and political sciences, and psychology) reported 26 percent of the parts of courses, although these departments were either not represented at all or only negligibly in the full courses. (See table 1.)

All of the major departments or divisions represented in this study show an increase in the number of parts of courses over the number of full courses reported by them. As seen in table 2, the teaching of social medicine through the introduction of the subject matter into courses not specifically devoted thereto varies markedly from department to department. The number of parts of courses is less than twice that of full courses in some departments; in other departments, nearly 20 times as many parts of courses are reported as full courses; and in still others, the increase is even more striking. Among the seven departments mentioned above, which absorb 94 percent of the

parts of courses, the departments of sociology report 211 parts of courses, or more than 16 times the number of full courses reported by them. Departments of economics, government and political sciences, and psychology, which offered no full courses or not more than two, reported the introduction of pertinent topics into 80, 41, and 36 parts of courses, respectively.

No full courses on the history of medicine and public health were offered by any of the departments of history, and only ten courses admitted giving some attention to this subject. One of the three major areas of interest in the general field of social medicine as defined in the questionnaire is the history of medicine and public health. That this subject should qualify as a requirement in liberal arts education, as well as in professional training, is supported by the opinions of scientists, educators, and physicians. Indeed, their demands for the incorporation of the history of science and medicine with general historical teaching have become emphatic in recent years. Noteworthy among these voices is that of Dr. James P. Warbasse, who was the originator of the first course on medical sociology to be given in a medical school in the United States. In his book, "The Doctor and the Public," he points directly to the crux of the problem when he says:

College graduates know much of Charles VIII, Henry VIII, Louis XIV, and Napoleon, who did more to spread syphilis over Europe than any other four men in the world. But they scarcely know the names of Metchnikoff, Schaudinn, Ehrlich and Wassermann, who did more than any other four men in the world to stop the disease.<sup>13</sup>

And again, pleading for wider knowledge of medical history, he continues:

The historical events that are emphasized in our modern education are political, economic, social, and religious. Finally come science and art. Chauvinistic prejudice in favor of each country requires that young people learn the names of their country's politicians and the dates connected with their various acts as well as the dates of wars and battles. Medicine is practically left out of school history to make place for these other matters. Still the history of medicine is a part of all history, quite as much as politics, commerce, exploration, and war—and a bit more intimate.

Certainly the events and the people who have affected the course of affairs are important, whether good or bad. But medicine also has profoundly influenced history, and its results have been largely beneficent. There is not only a cultural value but a practical use in a knowledge of medical history. This embraces knowledge of the great characters of medicine, the salient events of medicine, and the medical discoveries that have affected society.<sup>13</sup>

<sup>13</sup> Warbasse, J. P.: *The Doctor and the Public*. Hoeber, New York, 1935.

## THE CONTENT OF COURSES IN SOCIAL MEDICINE

Thus far we have reported on the number of part and full courses in social medicine available in 139 colleges and universities for undergraduate and graduate students and on the departments in which they are given. We come now to a consideration of the content of these courses. In the following section, an attempt has been made to coordinate the information on content afforded by the questionnaires and by descriptions in the college catalogs.

Topics have been listed according to the departments in which they are covered and in descending order of the frequency with which they were mentioned in the questionnaires and catalogs. The language of the catalogs and replies to questionnaires has been edited so that broad topics could be treated in tabular form. Wherever possible, the original language has been retained. The total number of topics covered in 715 courses is 35. In the accompanying list, it will be seen that although the same topics appear in the several departments and divisions, the essential differences are that: (1) The frequency with which a topic is mentioned varies in different departments, and (2) certain topics appear in particular departments and not in others. The list shows further whether these topics are treated in full courses or parts of courses.

Although it was not the intent of this study to explore the teaching of technical subjects such as sanitary science and the epidemiology of communicable diseases, nor of personal and family hygiene in its many aspects, a considerable number of courses reported in the questionnaires as germane to the study do, in fact, cover these topics. Similarly, the broad field of health education, both public and individual, was reported by the colleges as a topic for teaching in social medicine. While it is true that these topics are essential factors in any consideration of human health, these specific areas are not within the scope of social medicine as defined in the present study. Since it is clear that many colleges identify these topics with the limited scope of social medicine as defined in the questionnaire, we have therefore included such topics in the accompanying list and table, realizing the limitations of the questionnaire method and of the resulting data.

	Full courses	Parts of courses	Total
<b>BIOLOGICAL SCIENCES (20 FULL COURSES; 60 PARTS OF COURSES)</b>			
1. Environment and health.....	20	53	73
2. Water, sewerage, milk, etc., sanitation and control.....	17	52	69
3. Communicable diseases, causes and methods of control.....	3	57	60
4. Relationships of individual and home hygiene with community health.....	18	37	55
5. Food and drug control.....	19	30	49
6. Public health laws.....	11	33	44
7. Public health administration and organization.....	14	29	43
8. Problems and issues of medical care.....	16	22	38
9. Costs of medical care.....	15	22	37
10. Voluntary health insurance.....	17	20	37
11. Compulsory health insurance.....	17	20	37
12. Social and economic problems affecting public and individual health.....	19	17	36
13. Morbidity and mortality statistics.....	5	21	26
14. Social hygiene.....	9	16	25
15. Industrial hygiene, general.....	6	18	24
16. Mental hygiene, personal.....	7	15	22
17. Emotional problems affecting health and disease.....	14	8	22
18. History of medicine and public health.....	9	11	20
19. Health education.....	2	9	11
<b>ECONOMICS (NO FULL COURSES; 80 PARTS OF COURSES)</b>			
1. Industrial hygiene, general.....	0	64	64
2. Workmen's compensation.....	0	58	58
3. Industrial accidents.....	0	57	57
4. Social and economic problems affecting public and in- dividual health.....	0	42	42
5. Health insurance, general.....	0	39	39
6. Public health administration and organization.....	0	34	34
7. Voluntary health insurance.....	0	30	30
8. History of medicine and public health.....	0	7	7
<b>EDUCATION (6 FULL COURSES; 8 PARTS OF COURSES)</b>			
1. Relationships of individual and home hygiene with community health.....	4	8	12
2. Communicable diseases, causes, and methods of con- trol.....	5	6	11
3. Social and economic problems affecting public and in- dividual hygiene.....	6	4	10
4. Public health, general.....	2	8	10
5. Problems and issues of medical care.....	5	4	9
6. Public health administration and organization.....	3	4	7
7. Mental hygiene, personal.....	2	4	6
8. Social hygiene.....	3	2	5
9. Water, sewerage, milk, etc., sanitation and control.....	1	2	3

	Full courses	Parts of courses	Total
<b>GOVERNMENT AND POLITICAL SCIENCE (1 FULL COURSE; 41 PARTS OF COURSES)</b>			
1. Public health laws.....	0	35	35
2. Public health administration and organization.....	1	30	31
3. Social and economic problems affecting public and individual health.....	1	22	23
4. Health insurance, general.....	1	21	22
5. Costs of medical care.....	1	18	19
6. History of medicine and public health.....	0	8	8
7. Water, sewerage, milk, etc., sanitation and control....	1	5	6
<b>HISTORY (NO FULL COURSES; 10 PARTS OF COURSES)</b>			
1. Social and economic problems affecting public and individual health.....	0	8	8
2. History of medicine and public health.....	0	7	7
3. Health insurance, general.....	0	4	4
4. Public health laws.....	0	1	1
<b>HOME ECONOMICS (1 FULL COURSE; 7 PARTS OF COURSES)</b>			
1. Maternal and child health problems.....	1	7	8
2. Medical care problems of the family.....	1	6	7
3. Health insurance, general.....	0	5	5
4. Public health, general.....	1	4	5
<b>PHYSICAL EDUCATION AND HYGIENE (38 FULL COURSES; 67 PARTS OF COURSES)</b>			
1. Relationships of individual and home hygiene to com- munity health.....	37	34	71
2. Personal hygiene.....	28	43	71
3. Maternal and child health problems.....	23	38	61
4. Community health problems.....	20	40	60
5. Social and economic problems affecting public and individual health.....	21	35	56
6. Emotional problems affecting health and disease.....	18	37	55
7. Health education.....	24	27	51
8. Costs of medical care.....	19	31	50
9. Social hygiene.....	6	42	48
10. Environment and health.....	33	14	47
11. Communicable diseases—cause and control.....	15	31	46
12. Health insurance, general.....	12	29	41
13. Water, sewerage, milk, etc., sanitation and control....	7	30	37
14. Public health administration and organization.....	14	19	33
15. Public health, general.....	10	17	27
16. Rural hygiene.....	6	18	24
17. Morbidity and mortality statistics.....	2	21	23
18. History of medicine and public health.....	5	13	18
19. Industrial hygiene, general.....	9	6	15
20. Public health laws.....	1	8	9

	Full courses	Parts of courses	Total
<b>PSYCHOLOGY (2 FULL COURSES; 36 PARTS OF COURSES)</b>			
1. Emotional problems affecting health and disease.....	2	31	33
2. Mental hygiene, personal.....	2	28	30
3. Social diagnosis and treatment of mental and nervous disorders.....	0	24	24
4. Public care of mentally ill and handicapped.....	1	17	18
5. Social and economic problems affecting public and individual health.....	2	14	16
6. Health insurance, general.....	0	13	13
7. Psychology and psychotherapy applied to medical, public health, and social problems.....	1	11	12
8. Public health administration and organization.....	1	5	6
9. History of medicine and public health.....	2	4	6
<b>SOCIAL WORK (27 FULL COURSES; 71 PARTS OF COURSES)</b>			
1. Social implications and programs for specific diseases and conditions.....	25	63	88
2. Emotional problems affecting health and disease.....	22	57	79
3. Diseases frequently encountered in social work.....	27	51	78
4. Social and economic problems affecting public and individual health.....	15	60	75
5. Workmen's compensation.....	18	54	72
6. Costs of medical care.....	21	43	64
7. Public health administration and organization.....	9	51	60
8. Health insurance, general.....	12	37	49
9. Medical care problems of the family.....	16	33	49
10. Voluntary health agencies and resources.....	17	28	45
11. Interrelations of medical and social work.....	6	31	37
12. History of medicine and public health.....	8	14	22
<b>SOCIOLOGY (13 FULL COURSES; 211 PARTS OF COURSES)</b>			
1. Medical care problems of the family.....	13	169	182
2. Social and economic problems affecting public and individual health.....	13	147	160
3. Costs of medical care.....	13	128	141
4. Health insurance, general.....	11	108	119
5. Voluntary health insurance.....	8	105	113
6. Morbidity and mortality statistics.....	5	64	69
7. Public health administration and organization.....	9	47	56
8. Workmen's compensation.....	12	35	47
9. History of medicine and public health.....	4	21	25
10. Social hygiene.....	7	13	20
11. Water, sewerage, milk, etc., sanitation and control.....	2	6	8

	Full courses	Parts of courses	Total
<b>OTHER (4 FULL COURSES; 12 PARTS OF COURSES)</b>			
1. Public health, general.....	2	7	9
2. Industrial hygiene, general.....	3	4	7
3. Social and economic problems affecting public and individual health.....	1	5	6
4. History of medicine and public health.....	0	3	3
5. Health insurance, general.....	1	2	3

Although many departments reported only a few topics as being discussed in their courses and others mentioned as many as 20, it is possible to compare the relative emphasis placed upon specific topics in the several departments by assigning to them a rank in terms of the frequency with which particular departments mentioned the topic. This is shown in table 3.

TABLE 3.—Analysis of topics in 715 full and parts of courses by frequency in total number of courses and by rank attained in various departments and divisions

Total frequency	Topic	Rank	Rank by departments <sup>1</sup>												
			BS	Ee	Ed	GP	H	HE	PE	P	SW	S	O		
432	Social and economic problems affecting public and individual health.....	1	12	4	3	3	1	0	5	5	4	2	3		
311	Costs of medical care.....	2	9	0	0	5	0	0	8	6	6	3	0		
295	Health insurance, general.....	3	0	5	0	4	3	3	12	0	8	4	5		
270	Public health administration and organization.....	4	7	6	6	2	0	0	14	8	7	7	0		
238	Medical care problems of the family.....	5	0	0	0	0	0	2	0	0	9	1	0		
189	Emotional problems affecting health and disease.....	6	17	0	0	0	0	0	16	1	2	0	0		
180	Voluntary health insurance.....	7	10	7	0	0	0	0	0	0	0	5	0		
177	Workmen's compensation.....	8	0	2	0	0	0	0	0	0	5	8	0		
138	Relationships of individual and home hygiene with community health.....	9	4	0	1	0	0	0	1	0	0	0	0		
123	Water, sewerage, milk, etc., sanitation and control.....	10	2	0	9	7	0	0	13	0	0	11	0		
120	Environment and health.....	11	1	0	0	0	0	0	10	0	0	0	0		
118	Morbidity and mortality statistics.....	12	13	0	0	0	0	0	17	0	0	6	0		
117	Communicable diseases: causes and methods of control.....	13	3	0	2	0	0	0	11	0	0	0	0		
116	History of medicine and public health.....	14	18	8	6	0	2	0	18	9	12	9	4		
111	Industrial hygiene, general.....	15	15	1	0	0	0	0	19	0	0	0	2		
98	Social hygiene.....	16	14	0	8	0	0	0	9	0	0	10	0		
89	Public health laws.....	17	6	0	0	1	4	0	20	0	0	0	0		
88	Social implications of and programs for specific diseases and conditions.....	18	0	0	0	0	0	0	0	0	1	0	0		
78	Diseases frequently encountered in social work.....	19	0	0	0	0	0	0	0	0	3	0	0		
71	Personal hygiene.....	20	0	0	0	0	0	0	2	0	0	0	0		
69	Maternal and child health problems.....	21	0	0	0	0	0	1	3	0	0	0	0		
62	Health education.....	22	19	0	0	0	0	0	7	0	0	0	0		
60	Community health problems.....	23	0	0	0	0	0	0	4	0	0	0	0		
58	Mental hygiene, personal.....	24	16	0	7	0	0	0	0	2	0	0	0		
57	Industrial accidents.....	25	0	3	0	0	0	0	0	0	0	0	0		
51	Public health, general.....	26	0	0	4	0	0	4	15	0	0	0	0		
49	Food and drug control.....	27	5	0	0	0	0	0	0	0	0	0	0		
47	Problems and issues of medical care.....	28	16	0	5	0	0	0	0	0	0	0	0		
45	Voluntary health agencies.....	29	0	0	0	0	0	0	0	0	10	0	0		

See footnote at end of table.

TABLE 3.—Analysis of topics in 715 full and parts of courses by frequency in total number of courses and by rank attained in various departments and divisions—Con.

Total frequency	Topic	Rank	Rank by departments											
			BS	Ec	Ed	GP	H	HE	PE	P	SW	S	O	
37	Compulsory health insurance	30	11	0	0	0	0	0	0	0	0	0	0	0
37	Interrelations of medical and social work	31	0	0	0	0	0	0	0	0	0	11	0	0
24	Rural hygiene	32	0	0	0	0	0	0	0	16	0	0	0	0
24	Social diagnosis and treatment of mental and nervous disorders	33	0	0	0	0	0	0	0	0	3	0	0	0
18	Public care of mentally ill	34	0	0	0	0	0	0	0	0	4	0	0	0
12	Psychology and psychotherapy applied to medical, public health, and social problems	35	0	0	0	0	0	0	0	0	7	0	0	0

<sup>1</sup> BS=biological sciences; Ec=Economics; Ed=education; GP=government and political science; H=history; HE=home economics; PE=physical education and hygiene; P=psychology; SW=social work; S=sociology; O=other departments.

Thus, "social and economic problems affecting public and individual health" has the highest total frequency; hence, it ranks first in the list of 35 topics. However, this topic ranks twelfth in departments of biological sciences, which reported no less than 19 topics, and first in history departments, which reported only 4 topics.

The number of departments in which a topic is introduced does not determine the frequency with which it is taught in the group of institutions. For example, the topic "medical care problems of the family" is mentioned in only three departments, yet it ranks fifth in total frequency. On the other hand, "history of medicine and public health" is reported by 9 or more departments but ranks fourteenth in the frequency with which it is mentioned in 715 full and part courses.

Sixteen, or 45.7 percent, of the 35 topics are covered in only one or two departments. All of these topics rank below seventeenth in total frequency, and the majority of them are concerned with problems specific to the general subject-matter of the departments which cover them, as "personal hygiene" in departments of physical education and hygiene; "industrial accidents" in departments of economics; and "psychology and psychotherapy applied to medical, public health, and social problems" in departments of psychology. Some of these infrequently mentioned topics, on the other hand, are, in fact, parts of broader topics given in a number of departments, but treated by some departments as separate topics. For example, "compulsory health insurance" is treated as a separate topic by biological sciences, although it is obviously discussed under "health insurance, general" in other departments. "Rural hygiene" and "community health problems" are treated as separate topics by departments of physical education and hygiene, but are undoubtedly particularizations of the broader topic, "public health, general."

### EXAMPLES OF COURSES ON SOCIAL MEDICINE

The following descriptions of six courses reported in the study were selected at random and are duplicated herein to indicate the scope of the subject-matter in social medicine. With the possible exception of the last example cited, these courses illustrate the channeling of the subject-matter which has been indicated in the data, and the resulting gaps in a broad approach to the subject.

In an undergraduate course in labor security (economics) at one southern university, the following topics are covered in approximately ten class hours:

1. European experience and history of voluntary and compulsory health insurance. History of voluntary insurance schemes (including hospitalization) and public provisions for medical care in the United States. Public health provisions of the Federal Social Security Act. Public health program of the State.

A western university offers a number of courses on social medicine to both undergraduate and graduate students. Two undergraduate courses in the department of physical education and hygiene and one graduate course in sociology cover the following material:

1. The general field of public health work in the United States is surveyed. Consideration is given the economic and social causes of death, sickness, and disability; the conservation of infant, child, and maternal life; health problems of the home and industrial environment; chronic diseases; the need for and methods employed in health instruction.

2. The history of community effort for the care of the sick and disabled is related to the origins of the public health movement in the United States. The organization and administration of Federal, State, and local agencies is reviewed thoroughly.

3. Health aspects of social pathology are considered from the individual, family, and community points of view. Poverty, malnutrition, and housing as pathological conditions are related to disease. The economic consequences of disability, the costs of medical care, and ability to meet these costs are related to needs. Programs for the amelioration of these problems are reviewed.

A well-known college for women in the East offers several undergraduate courses. In one of these, a course in physiology and hygiene, the following topics are covered:

1. Historical development of present medical practice as a basis for good medical care. Other questions discussed are: How to choose a physician and what one has a right to expect from him. Why medical services cost so much. Devices available for deferred and budgeted payment. Extracurricular activities, i. e., research projects, discussions, attendance at medical and industrial meetings are encouraged.

The liberal arts college of a large midwestern university offers an undergraduate course in human biology, which integrates, as nearly as possible, all facets of the subjects with which we are concerned.

1. The course is designed first, to acquaint students with fundamental biological laws, i. e., the nature of living and nonliving matter; second, to impart an understanding of man as a biological animal, i. e., essentials in human body structure, physiology, hygiene, and disease; third, to educate in matters of individual and community health. On the biological level, the students are taught the importance of the biological aspects of agriculture, horticulture, animal and plant husbandry, game preservation, lumbering, etc., and man's relationship to such practical applications for healthful, mental, and physical living. On the sociological level, the problems of man, the biological and social animal, are related to their economic and eugenic setting. The basis of such teaching revolves about "the preservation of health, the proper rearing of children, the feeding of a nation, technological unemployment—in fact, the entire basis of rational adjustments between man and his environment—[which] involve applications of fundamental biological laws."<sup>14</sup> After a considerable foundation in the study of man's anatomy, physiology, and pathology and a comprehensive view of his nature and orientation in a natural world, the student is brought to the threshold of individual and community health problems. "In laying this foundation, we first consider general morbidity and mortality and statistics representing certain indices of health. \* \* \* Following the general consideration of the many factors influencing individual susceptibility and resistance to disease, we settle down to attack the community aspects of health, the costs of medical care, etc. *Throughout, we attempt to show how deeply medical care interweaves with many fields and how many aspects are present in immediate medical prevention and treatment problems.* After a careful study of the interweaving economic, social, psychological, and biological aspects of special disease problems, such as tuberculosis, syphilis, cancer, and heart disease, the students are then ready to learn about health and welfare organization at the local, State, and Federal levels. With this background, they are prepared to discuss more fully the economic and social problems of medical care and the various proposals (compulsory health insurance schemes, voluntary insurance schemes for medical and hospital care, etc.) that have been made."<sup>15</sup>

#### SUMMARY

1. Two hundred and thirty accredited colleges and universities in the United States were canvassed to determine (1) the extent to which social medicine was being taught and (2) the content of courses offered in this field. One hundred and seventy-seven of these institutions replied; 139 reported one or more full courses or parts of courses; 36 reported no courses; and 2 stated that plans had been formulated to give such courses in the 1940-41 school year.

2. A total of 715 courses was reported by 139 institutions; 112 were full courses and 603 were parts of courses.

3. Sixty-three, or 35 percent, of the responding institutions offered the 112 full courses and these same institutions offered 256, or 42 percent, of the 603 parts of courses.

4. More than half of the full courses and two-thirds of the parts of courses were offered for undergraduate students only.

<sup>14</sup> Quotation taken from the 1939-40 catalog of the college.

<sup>15</sup> Excerpts from correspondence with the professor who gives the course.

5. More than 87 percent of the full courses were offered in four major departments, biological sciences, physical education and hygiene, social work, and sociology; while 94 percent of the parts of courses were offered in seven departments, i. e., the above-mentioned departments and economics, government and political science, and psychology.

6. Thirty-five topics were mentioned in the descriptions of the 715 courses found in the questionnaires and catalogs. Nineteen of these topics were covered in three or more departments and the remaining topics were mentioned by only one or two.

#### COMMENT

The response of the institutions canvassed in this study is a significant indication of the general current interest in social medicine. Within 10 days after the initial mailing of questionnaires, 140 of the 177 responding institutions had replied. This is particularly striking because the questionnaires were sent at a time (the late spring) when administrative and teaching staffs are usually heavily burdened with tasks connected with the close of the school year. Such a response of itself would indicate a lively interest on the part of cooperating institutions. In addition, a considerable number of letters, commenting on the need for teaching the subjects and requesting materials for study and copies of the final report of this study, accompanied the returned questionnaires.

An impressive indication of the interest in teaching these subjects is found in the existence of 112 full courses and 603 additional courses which give partial attention to particular topics in the field. However, the concentration of the entire group of full courses and of a large proportion of the parts of courses in a relatively small group of institutions suggests a considerable lack of attention to social medicine in liberal arts colleges. Moreover, the fact that the same particular topics may be offered in several departments of a single institution, or in several courses in a single department suggests that, on the whole, the subject-matter of social medicine has crept into the curricula of colleges and universities, rather than having been placed there as a result of planned effort.

In a recent paper Prof. C. C. Barnes<sup>16</sup> holds that if education is to be functional and useful, new fields must be explored, expanded, and introduced into the curriculum. In every field of learning, the formal introduction of new subject-matter into college teaching occurs in response to active interest and demand. The response customarily lags behind interest until the new subject has been informally intro-

<sup>16</sup> Barnes, C. C.: The challenge to the social studies. *Social Education*, Vol. 3, No. 2, February 1939.

duced and a pattern of emphasis and instruction has already been formed. It would appear from the findings of this study that some such development in the teaching of social medicine is occurring in colleges and universities of the United States. Some of the courses reported in our study appear to grow out of the interests of individual institutions, of individual departments, and of individual instructors. Others are oriented toward a broader approach, and still others are the result of cooperative endeavor on the part of several faculties. It is not the province of the authors to determine whether all of these approaches should be applied, or whether one is more or less effective than the other. These are problems of method which educators alone are equipped to solve. In exploring the content of new fields, however, the educator should expect and should receive the whole-hearted cooperation of qualified workers in the health fields.

The data presented in this study are somewhat limited, and suggest further exploration in this field with special reference to (1) the content of the courses, (2) the quality of the teaching, (3) the materials used, and (4) the number and academic status of the students reached. The method of the study itself does not permit a true picture of the content of the courses. Likewise, it is impossible from these data to estimate the number of students reached by the courses offered or to indicate the undergraduate years—freshman, sophomore, junior, or senior—in which the courses are made available. In view of the varying degrees of maturity among students in different college years, no opinions can be formed as to the relative value of different types of courses in the preparation of students to meet the problems expressed in social medicine, either as citizens or as professional people in later years.

More and more, young people of college age are being drawn into active participation in the life of our civilization. As young individuals, many of them are already facing some of the problems discussed in this study. As they grow older, theirs will be the responsibility of solving such problems, not only for themselves and their families, but for their fellow-citizens as well. It therefore devolves upon educators and other professions to meet in joint effort to plan for the younger generation and to prepare them for responsible leadership in fields of mutual interest.

## ACCIDENTS IN THE URBAN HOME AS RECORDED IN THE NATIONAL HEALTH SURVEY\*

By ROLLO H. BRITTEN, *Senior Statistician*, JOAN KLEBBA, *Junior Statistician*, and DAVID E. HAILMAN, *Senior Administrative Assistant*, United States Public Health Service

The National Health Survey<sup>1</sup> (1935-36) included on its schedule questions relating to serious accidents which had occurred in the home during the 12 months immediately preceding the enumerator's visit. Over 700,000 urban households in the United States were covered. The survey followed established techniques, employing trained enumerators to obtain the information from the housewife or other responsible member of the household.

The data collected on home accidents in this survey fulfill a definite need. Although the Bureau of the Census has published data on deaths from home accidents for every year since 1935, it has not, of course, gathered information on accidents which did not result in death. For many years the only published statistics on nonfatal home accidents were compiled from records of safety organizations. Information from such records is not always representative of the total population.

The present report summarizes material collected on home accidents among 2,498,180 white and colored persons of known age, or 3.6 percent of the urban population of the United States (1930),<sup>2</sup> and presents: (a) Frequency of home accidents disabling for 1 week or more, by age, sex, economic status, employment status, and means of injury, days of disability per case and annual days of disability per person observed, by age, and (b) prevalence of impairments caused by home accidents, by means of injury and age.<sup>3</sup>

### FREQUENCY AND SEVERITY OF HOME ACCIDENTS

*Definition of home accident.*—Events which fulfilled certain requirements as to type, place of occurrence, and resulting disability were

\*From the Environmental Sanitation Section of the Division of Public Health Methods, National Institute of Health. Acknowledgment for assistance in the preparation of this article is made to James S. Fitzgerald and others of the staff of the National Health Survey, a project executed with the aid of grants from the Works Progress Administration.

<sup>1</sup> Perrott, George St. J., Tibbitts, Clark, and Britten, Rollo H.: *The National Health Survey: Scope and method of a Nation-wide canvass of sickness in relation to its social and economic setting.* Pub. Health Rep., 54: 1663 (1939). Reprint No. 2098.

<sup>2</sup> The sample was chosen to be representative in general of cities in the United States according to region and size. In large cities (100,000 and over) the population to be canvassed was determined by a random selection of many small districts based on those used in the U. S. Census of 1930. In the smaller cities selected for study the population was enumerated completely. See article by Perrott, Tibbitts, and Britten cited in footnote 1 for a more detailed account of the sampling procedure and a comparison of certain characteristics of the population enumerated with those of the urban population as a whole (Census, 1930).

<sup>3</sup> For a summary of data obtained on illnesses and accidents, see Britten, Rollo H., Collins, Selwyn D., and Fitzgerald, James S.: *The National Health Survey: Some general findings as to disease, accidents, and impairments in urban areas.* Pub. Health Rep., 55: 444 (1940). Reprint No. 2143.

recorded in the National Health Survey as home accidents.<sup>4</sup> These requirements were:

(1) The event must have occurred suddenly and caused bodily injury. In addition to the means of injury (or death) commonly thought of in connection with accidents (such as falls, burns, and cutting or piercing instruments), many other means (such as poisonous foods, poisonous gases, injuries by animals, mechanical suffocations, and drownings) are included, but not nonaccidental injuries received in brawls and suicidal attempts.

(2) The place of occurrence must have been in a dwelling or on residential property.<sup>5</sup>

(3) The event must have resulted in disability (that is, inability to work, attend school, care for the home, or engage in other customary activity) lasting 1 week or more within the 12 months immediately preceding the visit, or in hospitalization or death.<sup>6</sup>

*Frequency of home accidents.*—As reported in the National Health Survey, the annual frequency of accidents in the urban home (sole, primary, and contributory causes)<sup>7</sup> which disabled for 1 week or more was 4.65 per 1,000 persons,<sup>8</sup> or 2.7 percent of all cases of disability lasting 1 week or longer (from disease and accident). The total rate for accidents (all places of occurrence) was found to be 16.0 per 1,000 persons, of which 29 percent were home accidents, 24 percent occupational accidents, 20 percent automobile accidents, 21 percent other public accidents, and 6 percent accidents unspecified as to place of occurrence.

Particularly because of a certain amount of underreporting for the less severe accidents, the rate for home accidents disabling for a month or more should be considered. This rate was 2.52 per 1,000 persons. In other words, about 1 out of 400 persons was disabled for a month or

<sup>4</sup> For accidents (and for impairments resulting from accidents) the enumerator entered on the schedule the means of injury (such as burns, falls, etc.) and whether the accident occurred at home, at work, or in a public place. The 1929 Revision of the International List of the Causes of Death, with some modifications, was used as a basis for classification of means of injury as recorded by the enumerator.

<sup>5</sup> Not included as home accidents are those sustained, while on duty, by gainfully employed persons other than domestic servants.

<sup>6</sup> Accidents causing disability on the day of the interview (whether or not the period of disability had attained a duration of 1 week or more) were also recorded. Thus, two indices of the frequency of home accidents are obtainable: (a) An annual frequency rate of periods of disability of 1 week or more, and (b) the proportion of persons disabled on the day of the visit, but only the former rate is used in this report.

Except for accidents which caused disability on the day of the visit or resulted in hospitalization or death, no attempt was made to obtain a record of those which disabled for less than 1 week.

A nominal number of accidents which caused disability within the 12-month period, but occurred prior to it, have been included.

<sup>7</sup> For a discussion of classification of disability according to sole, primary, and contributory causes see Britten, Collins, and Fitzgerald, *op. cit.*, footnote 11, page 448, and lines 21-26, page 463.

In 87 percent of 11,608 reported periods of disability of 1 week or more in which an accident in the home was involved, the sole cause (or diagnosis) was the home accident; in 9 percent the home accident was the primary cause; and in only 4 percent, a contributory cause.

A small number of accident diagnoses (104) contributory to another accident diagnosis have been included for convenience in tabulating.

<sup>8</sup> Since the informant was asked at a single visit to recall accidents which had occurred in the family during the previous 12 months, this rate is somewhat below the true value, even though a minimum period of disability (7 consecutive days) was set in order to avoid too great underreporting.

longer during the 12 months immediately preceding the visit. The severe nature of accidents resulting in such a long period of disability is obvious.

*Disability from home accidents.*—The annual number of days of disability arising from home accidents (disabling for 1 week or more) was 0.23 per person observed, or 31 percent of the total rate for accidents (0.75 days, all places of occurrence) and 2.3 percent of the total rate for all causes (9.9 days). The average duration (within the 12-month period) of home accidents disabling for 1 week or more was 49 days per case. It is important to note that inclusion of accidents disabling for less than a week would have slightly increased the number of days per person and greatly decreased the average duration of disability.<sup>9</sup>

*Home accidents by sex.*—The annual frequency rate of recorded home accidents for females was almost one-and-one-half times that for males. As shown in table 1, the rate for females (all ages) was 5.45 per 1,000 and that for males, 3.78.

The fact that the National Health Survey rate for accidents, all places of occurrence combined, was 81 percent higher for males than females should make one cautious in attributing this excess in the home accident rate for females to a sex differential in accident proneness. Moreover, as discussed in a following section, it appears from the findings of this report that the excess in the home accident rate for females is due in part to greater exposure, both in terms of time and activity in the home.

TABLE 1.—Annual frequency of home accidents disabling for 1 week or more,<sup>a</sup> by age and sex<sup>b</sup>

Age (years)	Annual frequency per 1,000 persons			Number of cases <sup>c</sup>		
	Both sexes	Male	Female	Both sexes	Male	Female
All ages.....	4.65	3.78	5.45	11,608	4,540	7,068
Under 5.....	5.09	5.99	4.16	894	534	360
5-9.....	4.79	5.81	3.77	972	592	380
10-14.....	3.65	4.84	2.48	820	542	278
15-24.....	2.38	2.61	2.17	1,061	540	521
25-44.....	3.24	2.38	4.01	2,657	922	1,735
45-64.....	6.51	3.82	9.11	3,160	914	2,246
65 and over.....	14.35	7.79	19.65	2,044	496	1,548

The possibility of slightly more complete reporting by an informant of his or her own illnesses may account for a small portion of the excess in the rate for females, since in a greater percentage of instances females were the informants.

<sup>9</sup> Unpublished data from the survey made by the Committee on the Costs of Medical Care show 0.73 days of disability from all causes (illnesses and accidents) per person per year for cases disabling for less than 7 consecutive days. Based on this figure, it is estimated that for home accidents the annual number of days of disability per person observed would be about 0.25 if cases disabling less than 1 week could have been included.

*Home accidents by age.*—The annual frequency rate of home accidents disabling 1 week or more decreased from 5.09 per 1,000 persons under 5 years of age to 2.38 for persons 15–24 years, and then rose rapidly with advancing age to 14.35 for persons 65 years and older (table 1).<sup>10</sup>

Although this table appraises the change with age in the frequency of home accidents having a certain minimum period of disability (1 week), caution must be observed in applying these findings to accidents generally. It is recognized that a particular type of accident (i. e., with a given set of antecedent causes and circumstances) which is trifling in its effect on a young person may cause disability in an old person, and also that a type which causes a short period of disability in the former may disable the latter for a long period. Specifically, a type of accident which might disable a 20-year-old person for 3 days might disable a 70-year-old person for more than a week, and therefore be included in a frequency rate of accidents disabling for a week or more for persons 65 years and older, although excluded from the frequency rate for youths. Clearly then, an increase with advancing age in such a frequency rate may primarily reflect this increased severity.

*Disability from home accidents by age.*—The days of disability per person observed and the average length of periods of disability for home accidents causing disability of 1 week or more increased with advancing age, as is shown in table 2. The marked increase in the annual number of days of disability per person observed after 25 years of age reflects not only the increased frequency of periods of disability

TABLE 2.—Days of disability per case and annual days of disability per person observed for home accidents disabling 1 week or more,<sup>a</sup> by age

Age (years)	Annual days of disability per person observed <sup>b</sup>	Days of disability per case	Number of cases <sup>d</sup>	Age (years)	Annual days of disability per person observed <sup>b</sup>	Days of disability per case	Number of cases <sup>d</sup>
All ages.....	0.23	49.3	11,545	15-24.....	0.09	37.5	1,054
Under 5.....	.15	30.4	880	25-44.....	.14	44.7	2,643
5-9.....	.16	33.3	970	45-64.....	.36	55.1	3,147
10-14.....	.12	32.0	819	65 and over.....	1.08	75.4	2,032

of 1 week or more resulting from home accidents, but also the greater number of days comprising a single period of disability. The average length of periods of disability of 1 week or more resulting from home accidents for persons under 5 years was 30 days, and for persons 65 years and over, 75 days.

<sup>10</sup> If the complete rather than the attained duration of disability from home accidents still disabling on the day of the visit could have been included, there would have been a more rapid rise in this rate with advancing age.

*Home accidents by age and sex.*—From infancy to age 25, as is shown in table 1 and figure 1, more home accidents disabling 1 week or more occurred among males than females, but after age 25 the reverse was true. The rate for home accidents disabling 1 week or more decreased for both males and females from the rate for the age group under 5 years to a minimum in young adult life. The curve for females reached a minimum at an earlier age than that for males. After the low rate was reached, both rates increased with advancing age, but the curve for females rose more steeply than that for males.

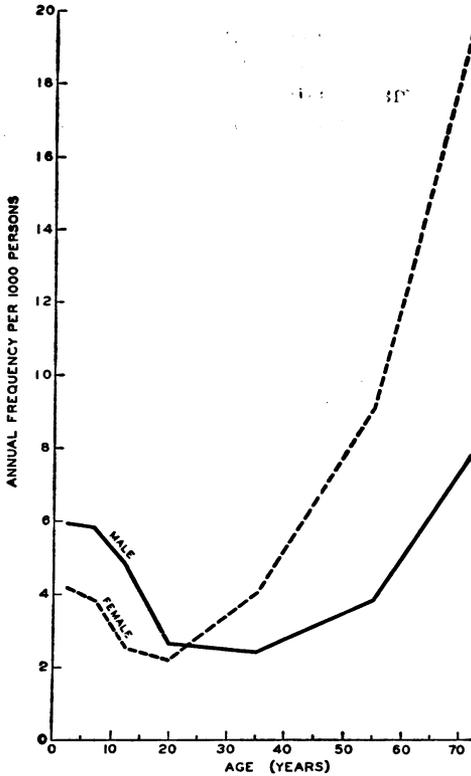


FIGURE 1.—Annual frequency (per 1,000 persons) of home accidents disabling for 1 week or more,<sup>a</sup> by age and sex.<sup>b</sup>

There are many factors reflected in the age-sex differentials in the rates, among which exposure, both in terms of time spent at home and amount and type of activity, is important. For persons under 25 the sex differential was undoubtedly due in part to the more hazardous activities of boys. Time spent at home may be an important factor in the change with age in the rates for each sex: Preschool children, who are usually home most of the day, have the highest rate; elementary school children, 5-14 years of age, have a lower rate; and youths 15-24 years of age, who on the average spend even less time

at home than elementary school children, have the lowest rate. (The relation between exposure and accidents among adults is discussed in a later section on employment status.)

*Home accidents and economic status.*—Persons in poor economic circumstances<sup>11</sup> reported relatively more accidents resulting in disability for 1 week or longer than did persons in those families in the higher income brackets (table 3). The annual frequency rate of serious home accidents decreases progressively from 6.01 for every 1,000 persons observed in the relief group to 4.10 for the group with from \$1,000 to \$1,500 annual family income. After an annual income of \$1,500 is reached there was little change in the rate.

Because of differences in age composition of persons in the several income brackets and because the rate for serious home accidents increased with age, the actual (crude) rates for persons in families in each income group do not adequately describe the true relation between serious home accidents and economic status. Hence, the rates have been adjusted to a standard age distribution.<sup>12</sup> The result-

TABLE 3.—Annual frequency (per 1,000 persons) of home accidents disabling for 1 week or more,<sup>a</sup> by age and economic status \*

Annual family income and relief status	Age (years)								Number of cases, all ages	
	All ages		Under 5	5-9	10-14	15-24	25-44	45-64		65 and over
	Crude	Adjusted <sup>1</sup>								
All incomes.....	4.65	4.65	5.09	4.79	3.65	2.38	3.24	6.51	14.35	11,608
Relief.....	6.01	6.25	6.22	5.16	4.48	3.16	5.43	8.56	17.16	2,721
Nonrelief:										
Under \$1,000.....	5.30	5.00	4.78	4.58	3.25	2.65	3.53	7.50	15.98	3,054
\$1,000 to \$1,500.....	4.10	4.20	4.88	4.75	3.70	2.13	2.91	5.72	12.15	2,204
\$1,500 to \$2,000.....	3.87	4.00	4.56	5.01	3.09	2.02	2.47	5.70	12.61	1,523
\$2,000 and over.....	4.01	4.03	4.55	4.67	3.39	2.06	2.54	5.58	12.98	1,758
\$1,500 and over.....	3.94	4.02	4.56	4.85	3.24	2.04	2.51	5.63	12.82	3,281
Relief and nonrelief under \$1,000.....	5.61	5.53	5.56	4.91	3.92	2.87	4.28	7.91	16.36	5,775

<sup>1</sup> Adjusted to the age composition of all persons enumerated in the National Health Survey.

ant rates permit consideration of the relation between serious home accidents and economic status with the differential effect of one influencing factor, age, removed. The actual (or crude) and the adjusted rates as well as the rates by age are shown in table 3 for

<sup>11</sup> In the National Health Survey families were classified by income received during the 12 months preceding the interview and also by whether relief from official agencies had been received during that time. Persons in families with annual income under \$1,000 comprised about 40 percent of the surveyed group; about 65 percent were in families with annual incomes under \$1,500, and 80 percent in families with incomes under \$2,000. Almost one-half of the lowest income group had been in receipt of relief during the year 1935

<sup>12</sup> Within any income group the rate for home accidents disabling 1 week or more in each age group was multiplied by the total number of persons (all incomes) in that age group, the products were summed, and the sum was divided by the total number of persons. For standard population, see figures given in reference c, page 2085 (all incomes).

groups with different income status. The adjusted rate for the relief group is higher than the crude rate, and for the nonrelief group under \$1,000, it is lower.

At each age the frequency of home accidents disabling for 1 week or more was greater for the relief group than for any other economic status group. This fact is evident from figure 2, which shows, by age, the ratio of the frequency rate for each economic status group to that for the highest. The greatest variation in this ratio occurred within the 25-44 age group, in which the relief rate was over twice

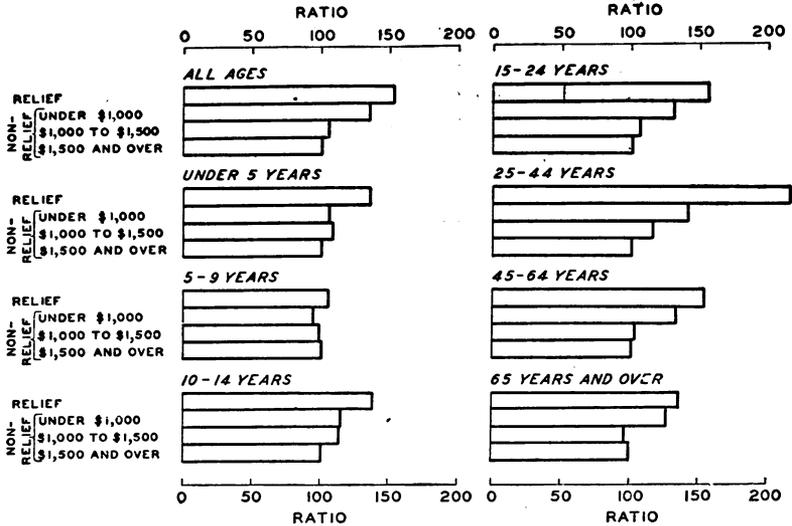


FIGURE 2.—Ratio of the annual frequency rate of home accidents disabling for 1 week or more<sup>a</sup> for each income group to the rate for the income group \$1,500 and over, by age (\$1,500 and over = 100 percent).<sup>a</sup>

as high as the rate for the group with highest economic status. The least variation in the ratio occurred for ages 5-9 years.

Annual frequency rates of home accidents disabling for a week or more, by sex, according to economic status, are given in table 4. The rates (both adjusted and crude) for each sex decreased with a rise in family income. As is also shown in table 4, the rates show almost no variation in the ratio of the rate for females to that for males for the several income groups.<sup>13</sup>

<sup>13</sup> Another description of the relation of home accidents to economic status is possible from the comparison of the rates for colored and white persons, since proportionately more colored persons are in low-income status than white persons. The home accident rate for colored persons was higher than that for white persons, as is shown by the following ratios for home accidents which caused disability on the day of the visit.

Geographic area	Ratio of colored to white rate (white rate = 100)
Northeast (cities of 100,000 or more).....	153
North Central (cities of 100,000 or more).....	123
South (cities of all sizes).....	132

In the areas shown the colored population is largely Negro. The West is omitted because of the different racial make-up of the colored group in this area.

*Home accidents and poor housing.*—The foregoing comparisons by economic status suggest an association between the quality of the housing and the frequency of home accidents. This phase is receiving special attention in other reports.<sup>14</sup>

TABLE 4.—Annual frequency of home accidents disabling for 1 week or more,<sup>a</sup> by sex and economic status,<sup>1</sup> and ratio of rate for females to that for males in different income groups.

Annual family income and relief status	Annual frequency per 1,000 persons				Ratio of female to male rate <sup>1</sup> (male rate = 100)	Number of cases *	
	Male		Female			Male	Female
	Crude	Adjusted <sup>1</sup>	Crude	Adjusted <sup>1</sup>			
All incomes.....	3.78	3.76	5.45	5.42	144	4,540	7,068
Relief.....	5.29	5.14	6.71	7.31	142	1,173	1,548
Nonrelief:							
Under \$1,000.....	4.13	4.02	6.32	5.77	144	1,115	1,939
\$1,000 to \$1,500.....	3.36	3.38	4.80	4.93	146	879	1,325
\$1,500 and over.....	3.16	3.28	4.67	4.68	143	1,271	2,010

<sup>1</sup> Adjusted to the age composition of all persons enumerated in the National Health Survey.

*Home accidents among employed workers and housewives.*—The character of a person's activity as well as the time spent in the home is apparently reflected in the rates for home accidents, as is brought out by comparing the rates for employed males, employed females, and housewives (ages 15–64 years).<sup>15</sup> Table 5 shows that the rate for employed male workers was 2.30 per 1,000 persons, that for employed female workers 3.90, and that for housewives 5.33. The rates for employed female workers and for housewives exceeded that for employed male workers by 70 percent and 132 percent, respectively.

<sup>14</sup> Britten, Rollo H., Brown, J. E., and Altman, Isidore: Characteristics of urban housing and their relation to illness and accidents: Summary of findings from the National Health Survey. The Milbank Memorial Fund Quarterly, vol. 18, No. 2, April 1940.

Britten, Rollo H., and Altman, Isadore: Illness and accidents among persons living under different housing conditions. In press.

<sup>15</sup> Rates adjusted to age composition of all persons enumerated in the National Health Survey.

Employment status used is that existing on day of visit and not necessarily that on day of accident which fact may introduce an element of selection in comparisons by employment status. The term "employed workers," as used in this report, applies to persons engaged for wages in money or in kind, including those on vacation, on strike, or temporarily ill who were expecting to return to work and part-time workers (except those who were attending school regularly). The term "housewives" applies to women, not gainfully employed, whose main duty is care of the home.

As indicated in footnote 5, accidents of servants while at work on residential property are included as home accidents. Since such servants comprise only about 10 percent of female workers and about 0.2 percent of male workers (U. S. Bureau of the Census, 1930) comparison between rates for these two groups of workers (and for housewives) is not materially affected by this inclusion.

TABLE 5.—Annual frequency of home accidents disabling for 1 week or more<sup>a</sup> among persons 15-64 years of age, by employment status and sex,<sup>b</sup> and ratio of rate in each group to that for employed male workers

Sex and employment status	Annual frequency per 1,000 persons		Ratio of rate <sup>1</sup> to that for employed workers (male rate=100)	Number of cases
	Crude rate	Adjusted rate <sup>1</sup>		
Employed male workers.....	2.37	2.30	100	1,298
Employed female workers.....	3.27	3.90	170	684
Housewives.....	5.92	5.33	232	2,983

<sup>1</sup> Adjusted to the age composition of all persons 15-64 years of age enumerated in the National Health Survey.

The influence of the character of activity and time spent in the home on the rates of serious home accidents is evident also from table 6, in which rates for employed female workers and for housewives are given by age. As was to be expected, the rates for housewives were higher than the rates for employed female workers for every age group over the range from 15 to 65 years. It is to be noted, however, that, while for the youngest age group, 15-24 years, the rate for housewives (2.97 per 1,000 persons) was over twice as high as that for employed female workers (1.46 per 1,000), the excess in the rates for housewives decreased progressively after age 25. It is possible that this trend reflects not only a minimum of activity in the home on the part of young employed female workers (15-24 years) and increased activity on the part of the older employed female workers, but also performance of fewer home duties by housewives after age 45.

TABLE 6.—Annual frequency of home accidents disabling for 1 week or more<sup>a</sup> among employed female workers, and among housewives (ages 15-64 years), and ratio of rate for housewives to that for employed female workers, by age<sup>b</sup>

Age (years)	Annual frequency per 1,000 persons		Ratio of rate for housewives to that for employed female workers (rate for employed female workers=100)	Number of cases	
	Employed female workers	Housewives		Employed female workers	Housewives
All ages, 15-64:					
Crude rate.....	3.27	5.92	181	684	2,983
Adjusted rate <sup>1</sup> .....	3.90	5.33	137		
15-24.....	1.46	2.97	203	94	146
25-44.....	2.78	4.33	157	300	1,195
45-64.....	8.08	9.19	114	290	1,642

<sup>1</sup> Adjusted to the age composition of all persons 15-64 years of age enumerated in the National Health Survey.

Another indication of the influence of the factor of exposure on the rates for serious home accidents is evident from the comparison of such rates for employed female workers and for housewives by economic status. As shown in table 7, in all income groups housewives had proportionately more accidents in the home than did employed female workers. Furthermore, the percentage by which the rates for housewives exceeded the rates for employed female workers was greater in the higher income groups (over \$1,000) than it was in the lower income groups (relief and nonrelief under \$1,000). The comparatively high rates among employed female workers in the lower income groups may be due to the fact that these employed women perform home duties to a greater degree than do employed women in the higher income groups.

TABLE 7.—Annual frequency of home accidents disabling for 1 week or more<sup>a</sup> among employed female workers and among housewives (ages 15-64 years)<sup>i</sup> and ratio of the rate for housewives to that for employed female workers, by economic status

Annual family income and relief status	Annual frequency per 1,000 persons				Ratio of the rate <sup>1</sup> for housewives to that for employed female workers (rate for employed female workers =100)	Number of cases	
	Crude rate		Adjusted rate <sup>1</sup>			Em- ployed female workers	House- wives
	Em- ployed female workers	House- wives	Em- ployed female workers	House- wives			
All incomes.....	3.27	5.92	3.90	5.33	137	684	2,983
Relief.....	4.30	7.73	5.65	7.04	125	66	651
Nonrelief:							
Under \$1,000.....	4.54	6.04	4.92	5.49	112	261	720
\$1,000 to \$1,500.....	2.66	5.50	3.12	5.05	162	121	659
\$1,500 and over.....	2.60	5.27	3.26	4.63	142	236	953
Relief and nonrelief under \$1,000.....	4.49	6.74	5.01	6.14	123	327	1,371

<sup>1</sup> Adjusted to the age composition of all persons 15-64 years of age enumerated in the National Health Survey.

*Home accidents among housewives by economic status and age.*—While, as has been indicated in the preceding paragraph, the annual frequency rates of serious home accidents among housewives (15-64 years of age) were relatively higher in the lower economic status groups, there were considerable differences by age in the relationship between such rates and economic status (see table 8). The least variation by economic status was shown for the younger housewives, aged 15-24 years. In the age group 25-44 years, the rate was almost twice as high for housewives in families on relief as it was for housewives in families with incomes of \$1,500 and over.

TABLE 8.—Annual frequency of home accidents disabling for 1 week or more <sup>a</sup> among housewives (ages 15-64 years), and ratio of the rate for each income group to that for the highest income group, by age and economic status <sup>b</sup>

Annual family income and relief status	Annual frequency per 1,000 housewives					Ratio of the rate for each income group to that for the highest income group (rate of highest income group =100)				Number of cases, all ages: 15-64
	All ages: 15-64 years		15-24 years	25-44 years	45-64 years	All ages: 15-64 years <sup>1</sup>	15-24 years	25-44 years	45-64 years	
	Crude rate	Ad-justed rate <sup>1</sup>								
All incomes.....	5.92	5.33	2.97	4.33	9.19	-----	-----	-----	-----	2,983
Relief.....	7.74	7.04	2.74	6.54	11.85	152	95	191	143	651
Nonrelief:										
Under \$1,000.....	6.04	5.49	3.44	4.25	9.46	119	119	124	114	720
\$1,000 to \$1,500.....	5.40	5.05	2.60	4.23	8.70	109	90	124	105	659
\$1,500 and over.....	5.27	4.63	2.89	3.42	8.28	100	100	100	100	953
Relief and nonrelief under \$1,000.....	6.74	6.14	3.16	5.26	10.37	133	109	154	125	1,371

<sup>1</sup> Rates adjusted to the age composition of all persons 15-64 years of age enumerated in the National Health Survey.

*Home accidents by means of injury.*—The enumerator recorded on the schedule not only the place of occurrence of accidents but also the means of injury. The latter have been grouped into the following four broad categories: Falls, cutting and piercing instruments, burns, and all other means.<sup>16</sup> The annual frequency per 1,000 persons of home accidents disabling for a week or more, according to such categories, was:

Falls <sup>17</sup> .....	2.99
Cutting and piercing instruments.....	.61
Burns.....	.38
All other means <sup>18</sup> .....	.67

Falls made up 64 percent of home accidents (disabling 1 week or more), cutting and piercing instruments 13 percent, burns 8 percent, and other means of injury 14 percent.

The annual frequency rates per 1,000 persons according to means of injury, classified by age and sex, are shown in table 9. For each age group the rate for falls was much higher than the rate for any other means of injury and largely determines the age curve for all means of injury combined (see fig. 3).

<sup>16</sup> *Falls* relates to falls of persons and includes fractures and sprains unspecified as to means of injury. *Cutting and piercing instruments* includes infected wounds unspecified as to means of injury. *Burns* comprises burns of any type (except those from electric currents). The *all other* group is made up largely of accidents caused by machinery, animals, firearms, etc., and of poisonings (gas, food, plants, etc.). Homicides and suicides (including attempts) are excluded.

<sup>17</sup> The annual frequency rates for the accidental traumatisms included in *falls* were as follows: Fall with fracture, 1.31 per 1,000 persons; fall with infected wound, 0.04; other falls, 1.25; sprain (unspecified as to means of injury), 0.15; fracture (unspecified as to means of injury), 0.24.

<sup>18</sup> In the *all other* group, machinery, and firearms and fireworks gave the largest annual frequency rates, being, respectively, 0.10 and 0.03 per 1,000 persons.

TABLE 9.—Annual frequency (per 1,000 persons) of home accidents disabling for a week or more,\* by means of injury, and sex and age of persons observed<sup>1</sup>

Sex and means of injury	Age (years)								Number of cases, all ages *
	All ages	Under 5	5-9	10-14	15-24	25-44	45-64	65 and over	
Both sexes—all means.....	4.65	4.09	4.79	3.65	2.38	3.24	6.51	14.35	11,608
Falls.....	2.99	2.44	2.80	2.17	1.14	1.89	4.62	11.86	7,475
Cutting and piercing instruments.....	.61	.46	.75	.72	.61	.53	.64	.74	1,519
Burns.....	.38	1.26	.59	.27	.23	.25	.31	.54	938
All other means <sup>1</sup> .....	.67	.93	.66	.49	.40	.56	.93	1.21	1,676
Male—all means.....	3.78	5.99	5.81	4.84	2.61	2.38	3.82	7.79	4,540
Falls.....	2.12	2.87	3.53	2.85	1.12	1.17	2.32	5.80	2,544
Cutting and piercing instruments.....	.66	.62	.89	1.03	.76	.51	.54	.76	795
Burns.....	.32	1.37	.56	.27	.20	.18	.19	.33	385
All other means.....	.68	1.14	.83	.70	.53	.52	.78	.86	816
Female—all means.....	5.45	4.16	3.77	2.48	2.17	4.01	9.11	19.65	7,068
Falls.....	3.80	1.99	2.05	1.49	1.15	2.54	6.86	16.76	4,931
Cutting and piercing instruments.....	.56	.30	.60	.42	.48	.55	.73	.72	724
Burns.....	.43	1.17	.62	.28	.25	.32	.44	.67	553
All other means.....	.66	.71	.50	.30	.29	.60	1.06	1.50	860

<sup>1</sup> The largest groups were machinery, with a rate of 0.10 per 1,000 (all ages), and firearms and fireworks, 0.03.

Although the curves for the other three means-of-injury groups appear to be quite similar in figure 3, there was considerable variation among them in the trend with age. The rate for burns, in sharp contrast with that for falls, was much higher for children, especially those under 5 years of age, than it was for adults, and after reaching

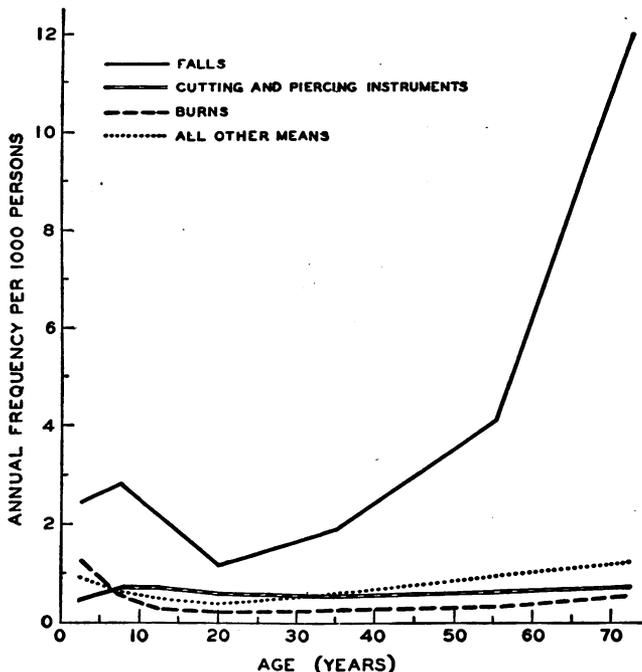


FIGURE 3.—Annual frequency (per 1,000 persons) of home accidents disabling for 1 week or more,\* by age and means of injury.<sup>1</sup>

a minimum at about age 25 increased with advancing age, but not nearly so rapidly as did the rate for falls. The variation by age was much less in the rates for cutting and piercing instruments than in the rates for the other groups of means of injury.

In figure 4 the rates are differentiated by sex as well as by age. Since, as has been indicated, the rate for falls largely fixes the pattern

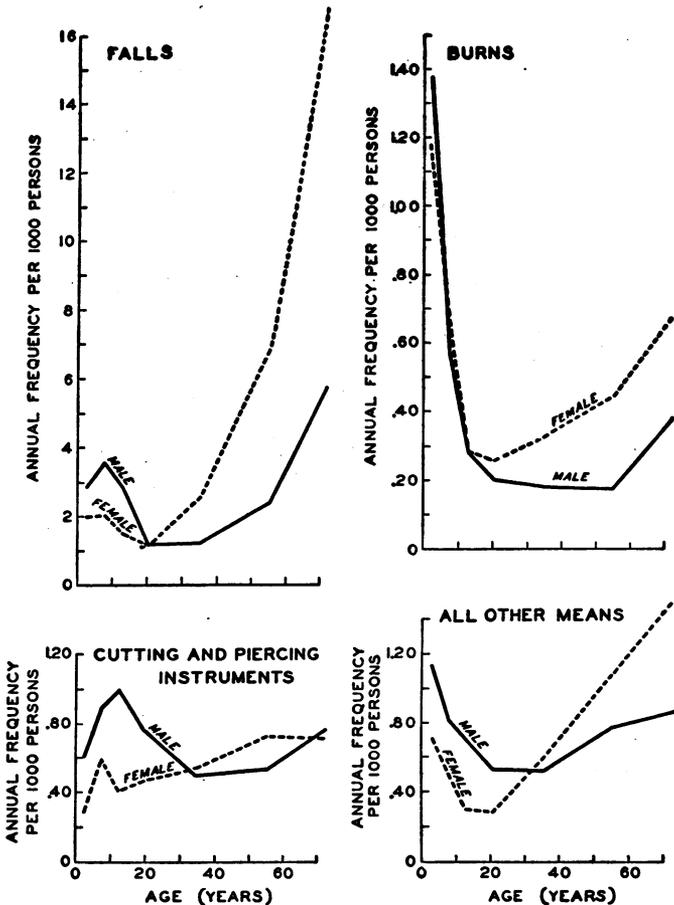


FIGURE 4.—Annual frequency (per 1,000 persons) of home accidents disabling for 1 week or more \* for different means of injury, according to sex and age. (Scales are so made that the rate for all ages of both sexes represents an interval on the vertical rate scale that corresponds to about 30 years on the horizontal age scale.)

of the rates for all means of injury combined, the discussion in regard to figure 1 is applicable here so far as the curve for falls is concerned. For burns the rates for males and females were practically identical among children. For adults, however, the rates for females were very much greater than those for males. In the younger age groups the rates for males for cutting and piercing instruments were very much higher than the rates for females.

In a previous section there has been some discussion of the effect of exposure on the differences in the rates by age and sex for certain employment status groups. The variation by various means of injury shown in figure 4 by age and sex similarly reflects differences in amount of exposure.

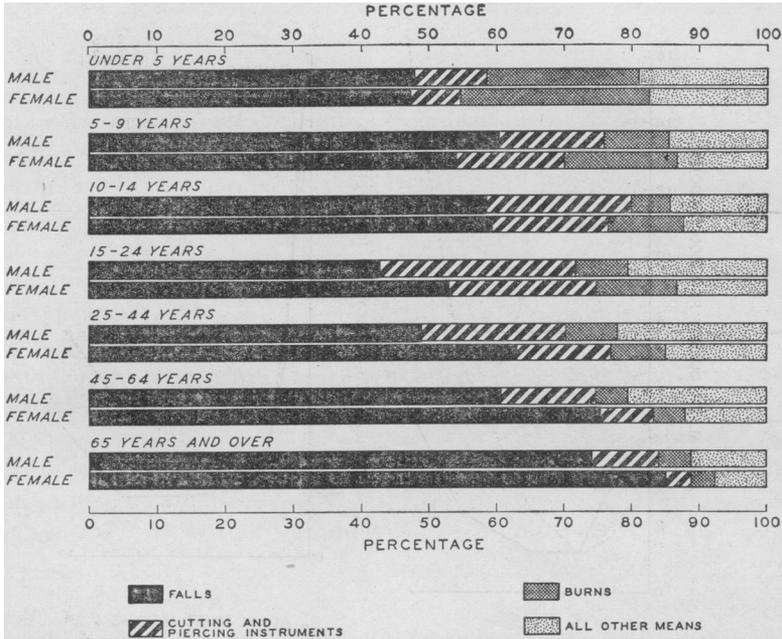


FIGURE 5.—Percentage distribution of home accidents disabling for 1 week or more • by means of injury in different age and sex groups.<sup>b</sup>

Figure 5 gives the percentage distribution of home accidents disabling for 1 week or more by means of injury and by age and sex. For each sex at every age the greatest proportion of these accidents was due to falls. From infancy to age 10 falls made up a slightly higher proportion of home accidents disabling for 1 week or more for boys than for girls. For the age group 10-14 years there was no appreciable difference in the two rates. After age 15 the proportion of home accidents due to falls among females was not only in excess of that among males, but the amount of the excess was greater than the male excess among children.

*Fractures resulting from home accidents.*—One indication of the severity of home accidents is the relatively high annual frequency of those (disabling for 1 week or more) which involved fractures, 1.55 per 1,000 persons (table 10). Fractures occurred in one-third of all such home accidents and in one-half of those ascribed to falls (see footnote 17).

TABLE 10.—Annual frequency (per 1,000 persons) of home accidents disabling for a week or more<sup>a</sup> which resulted in fractures, by sex and age of persons observed<sup>b</sup>

Sex	Age (years)							Number of cases <sup>b</sup>	
	All ages	Under 5	5-9	10-14	15-24	25-44	45-64		65 and over
Both sexes.....	1.65	1.26	1.89	1.37	0.51	0.79	2.37	6.61	3,879
Male.....	1.17	1.39	2.40	1.92	.63	.54	1.18	3.19	1,410
Female.....	1.90	1.12	1.38	.82	.41	1.00	3.53	9.37	2,469

As in the case of falls, the annual frequency rate of serious accidents involving fractures was considerably higher for females (1.90 per 1,000 persons) than for males (1.17), but there was little difference between the sexes in the proportion of falls which resulted in fractures.

The distribution by age of home accidents (disabling for 1 week or more) associated with fractures is shown in table 10. The annual frequency rate for children under 5 years was 1.26 per 1,000; it increased to 1.89 in the succeeding age group (5-9); fell to a minimum of 0.51 among youths (15-24); then rose steeply to a maximum of 6.61 among persons 65 years and over. This age curve follows, at a lower level, that for falls (see fig. 3), with the exception that the rate for fractures was relatively higher among children under 15 and relatively lower in the age groups 15-24 and 25-44. Of home accidents (disabling for 1 week or more) due to falls, the percentage resulting in fractures was, according to age, as follows:

All ages	Under 5 years	5-9 years	10-14 years	15-24 years	25-44 years	45-64 years	65 years and over
52	52	67	63	45	42	51	56

#### HOME ACCIDENTS AS A CAUSE OF IMPAIRMENT

*Orthopedic impairments resulting from home accidents.*—Still another aspect of the seriousness of the problem of home accidents is the fact that a large number of persons surveyed had permanent orthopedic impairments<sup>19</sup> which were reported as caused by home accidents. As table 11 shows, the prevalence of these impairments, composed of both loss of members and crippled or paralyzed members, was 2.88 per 1,000 persons,<sup>20</sup> a figure which represents (for these impairments) the permanent effects of injury from home accidents over the attained lifetime of living individuals in the surveyed population. Impair-

<sup>19</sup> Impairments enumerated were of such a serious nature that the family informant considered them to be permanently crippling, deforming, or paralyzing (including loss of members). They may or may not have caused disability, i. e., inability to pursue usual activities of work, school, household duties, etc.

<sup>20</sup> Since, in general, only one orthopedic impairment was coded for each individual, all references to total prevalent cases can also be considered as representing the total number of individuals affected. "One orthopedic impairment" may be inclusive of more than one member or part of the body, but when it was not possible to include under "one orthopedic impairment" all parts of the body affected for one person, the most serious impairment was coded.

ments due to home accidents constituted about 15 percent of those due to all causes, accident and disease, and 24 percent of those due to accidents wherever the place of occurrence.<sup>21</sup>

TABLE 11.—Prevalence (per 1,000 persons) of orthopedic impairments due to home accidents,<sup>1</sup> according to sex and age of persons observed,<sup>b</sup> and ratio of male rate to female rate by age of persons observed

Sex	Age (years)								Number of cases, <sup>1</sup> all ages
	All ages	Under 5	5-9	10-14	15-24	25-44	45-64	65 and over	
Both sexes.....	2.88	0.27	0.73	1.12	1.85	2.67	4.56	10.65	7,194
Male.....	3.30	.22	.84	1.53	2.75	3.57	4.90	8.74	3,949
Female.....	2.51	.32	.62	.72	1.08	1.88	4.23	12.24	3,245
Ratio of male to female rate..	131	69	135	212	255	190	116	71	

<sup>1</sup> Permanent effects of home accidents accumulated over the attained lifetime of living individuals in the population.

As is also shown in table 11, the prevalence of orthopedic impairments due to home accidents was greater among males (3.30 per 1,000 persons) than among females (2.51). This excess in the male orthopedic rate over the female (30 percent) contrasts sharply with the excess in the female over the male rate (50 percent) in the case of the annual frequency rate of home accidents (see table 1). From table 11 it is also seen that this excess in the male over the female rate of orthopedic impairments was greatest in the age group 15-24 and was still very great in the age groups 10-14 and 25-44. In the two extreme age groups, under 5 years and 65 years and over, the rate among females was higher than that among males.

From table 12 it may be seen that loss of members accounted for about 42 percent of orthopedic impairments resulting from home accidents and that these losses were predominantly (90 percent) fingers and toes. Crippled or paralyzed members, constituting the remaining 58 percent of the impairments, were, on the other hand, chiefly "major" (i. e., other than fingers and toes). Of these crippled or paralyzed members, feet or legs made up 52 percent, hands or arms 19 percent, spine, back, side, other trunk, head, or entire body, 15 percent, and fingers or toes 14 percent.

<sup>21</sup> See Britten, Collins, and Fitzgerald, op. cit., page 480.

**TABLE 12.**—*Prevalence (per 1,000 persons) of specified orthopedic impairments due to home accidents,<sup>1</sup> according to age of persons observed<sup>2</sup>*

Nature of impairment	Age (years)								Number of cases, <sup>1</sup> all ages
	All ages	Under 5	5-9	10-14	15-24	25-44	45-64	65 and over	
All orthopedic impairments.....	2.88	0.27	0.73	1.12	1.85	2.67	4.56	10.65	7,194
Finger(s) and/or toe(s).....	1.33	.14	.38	.61	1.03	1.47	2.03	2.94	3,312
Hand(s) and/or arm(s).....	.36	.040	.11	.18	.26	.30	.60	1.26	903
Foot (feet) and/or leg(s).....	.94	.057	.16	.24	.39	.64	1.59	5.58	2,360
Spine, back, chest, side, other trunk, head, or entire body.....	.25	.034	.079	.085	.18	.25	.34	.88	619
Loss of members.....	1.22	.11	.33	.52	.95	1.35	1.95	2.61	3,056
Finger(s) and/or toe(s).....	1.10	.10	.33	.50	.88	1.23	1.70	2.27	2,748
Hand(s) and/or arm(s).....	.052	(?)	-----	(?)	.034	.054	.095	.15	130
Foot (feet) and/or leg(s).....	.071	-----	-----	-----	.031	.072	.16	.20	178
Crippled or paralyzed members.....	1.66	.16	.40	.60	.90	1.32	2.60	8.04	4,138
Finger(s) and/or toe(s).....	.23	.034	.054	.11	.14	.25	.33	.67	564
Hand(s) and/or arm(s).....	.31	.034	.11	.17	.22	.25	.50	1.11	773
Foot (feet) and/or leg(s).....	.87	.057	.16	.24	.36	.57	1.43	5.38	2,182
Spine, back, chest, side, other trunk, head, or entire body.....	.25	.034	.079	.085	.18	.25	.34	.88	619

<sup>1</sup> Permanent effects of home accidents accumulated over the attained lifetime of living individuals in the population.

<sup>2</sup> Less than 5 cases.

Largely because of the accumulation (over the attained lifetime of the population) of the permanent effects of home accidents, the prevalence rate increased rapidly with advancing age (see table 12 and fig. 6). Among children under 5 years of age the rate was 0.27 per 1,000; it was almost 10 times that figure (2.67) in the age group 25-44 and increased to almost 40 times that amount (10.65) among older persons (65 and over). A comparison of the rate for crippled or paralyzed members (chiefly major) with that for loss of members (chiefly minor) reveals that crippled or paralyzed members were somewhat more prevalent in the younger ages (under 15) than were losses; the two rates were about the same from ages 15 to 45; after 45 years the prevalence of crippled or paralyzed members increased much more rapidly than that of loss of members.

The prevalence of specific orthopedic impairments due to home accidents is given in table 13 according to the means of injury. Falls were the most important means and were responsible for 39 percent of the home injuries which resulted in orthopedic impairments.

From a comparison of data in tables 9 and 13, it is evident that cutting and piercing instruments, machinery, and firearms, and fireworks were the means of injury in a greater proportion of home accidents resulting in orthopedic impairments (over the attained lifetime of the population) than in the total of home accidents disabling

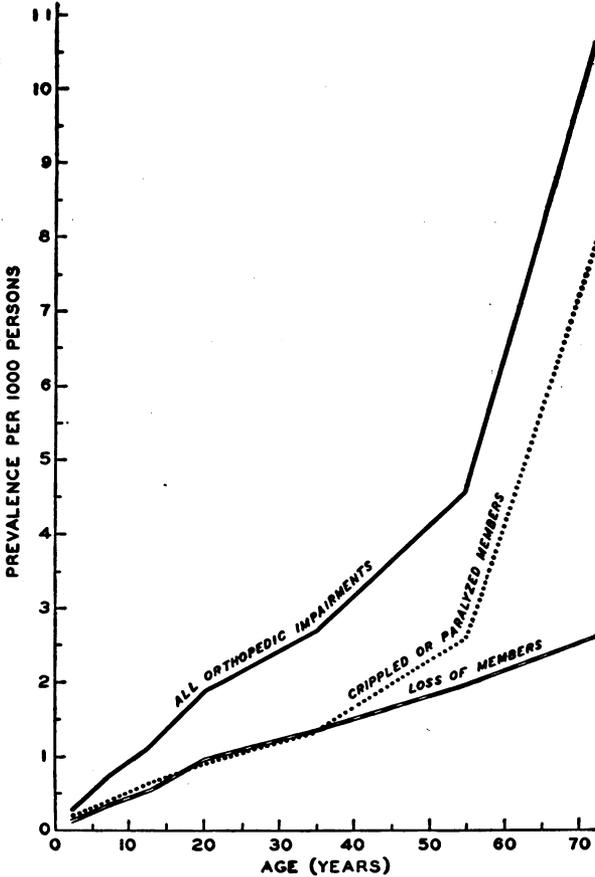


FIGURE 6.—Prevalence of orthopedic impairments due to home accidents, according to age.<sup>b</sup>

for 1 week or more (with or without resultant orthopedic impairments) occurring during the 12-month period immediately preceding the visit. The percentage distribution according to means of injury is as follows:

Orthopedic impairments due to home accidents accumulated over the attained lifetime of the surveyed population.....

	All means	Falls	Cutting and piercing instruments	Burns	Machinery	Firearms and fireworks	All other
Orthopedic impairments due to home accidents accumulated over the attained lifetime of the surveyed population.....	100	39	23	5	11	6	17

Home accidents disabling for 1 week or more during 12-month period immediately preceding the visit.....

Home accidents disabling for 1 week or more during 12-month period immediately preceding the visit.....	100	64	13	8	2	1	12
---	-----	----	----	---	---	---	----

It is possible that the distribution of recently acquired impairments according to the means of injury would be somewhat different, owing to changes in exposure to the various means of injury.

As shown in table 13 and figure 7, there was an association between the nature of the impairment and the means of injury. Specifically, cutting and piercing instruments and machinery played the most important part in the loss or crippling of fingers and toes; firearms and fireworks, in the loss of hands or arms; falls and cutting and piercing instruments, in the loss of feet or legs; and falls, in the crippling or paralyzing of major members (hands or arms, feet or legs, spine, etc.).

TABLE 13.—Prevalence (per 1,000 persons) of orthopedic impairments due to home accidents,<sup>1</sup> according to nature of impairment and means of injury<sup>b</sup>

Nature of impairment	Means of injury							Number of cases, <sup>1</sup> all means
	All means	Falls	Cutting and piercing instruments	Burns	Machinery	Firearms and fireworks	All other means	
All orthopedic impairments.....	2.88	1.12	0.65	0.13	0.31	0.17	0.50	7,194
Finger(s) and/or toe(s).....	1.33	.054	.56	.059	.28	.11	.25	3,312
Hand(s) and/or arm(s).....	.36	.19	.036	.038	.019	.032	.051	903
Foot(feet) and/or leg(s).....	.94	.69	.052	.024	.006	.023	.15	2,360
Spine, back, chest, side, other trunk, head, or entire body.....	.25	.19	( <sup>2</sup> )	.009	( <sup>2</sup> )	.004	.044	619
Loss of members.....	1.22	.059	.49	.038	.27	.14	.23	3,056
Finger(s) and/or toe(s).....	1.10	.027	.47	.031	.26	.10	.21	2,748
Hand(s) and/or arm(s).....	.052	.009	.008	.004	.007	.019	.036	130
Foot(feet) and/or leg(s).....	.071	.023	.020	.003	.004	.010	.011	178
Crippled or paralyzed members.....	1.66	1.06	.16	.092	.038	.036	.27	4,138
Finger(s) and/or toe(s).....	.23	.027	.098	.028	.023	.005	.043	564
Hand(s) and/or arm(s).....	.31	.18	.028	.034	.012	.013	.045	773
Foot(feet) and/or leg(s).....	.87	.66	.033	.020	.002	.014	.14	2,182
Spine, back, chest, side, other trunk, head, or entire body.....	.25	.19	( <sup>2</sup> )	.009	( <sup>2</sup> )	.004	.044	619

<sup>1</sup> Permanent effects of home accidents accumulated over the attained lifetime of living individuals in the population.

<sup>2</sup> Less than 5 cases.

*Blindness resulting from home accidents.*—Further evidence that home accidents are a serious problem is contained in the data on the causes of blindness as recorded in the survey. Table 14 presents the prevalence rates of blindness in one or both eyes<sup>22</sup> resulting from home accidents.<sup>23</sup> It is to be noted from this table that: (a) The prevalence

<sup>22</sup> The enumerator was not asked to inquire in regard to partial blindness but to enter it when the information was volunteered.

<sup>23</sup> For prevalence rates of blindness due to all causes see Britten, Collins, and Fitzgerald, op. cit., table 14, page 463.

A more detailed report on the blind as enumerated in the National Health Survey is in preparation.

rate of blindness in one or both eyes due to home accidents was 57.9 per 100,000; (b) the male prevalence rate of blindness (one or both

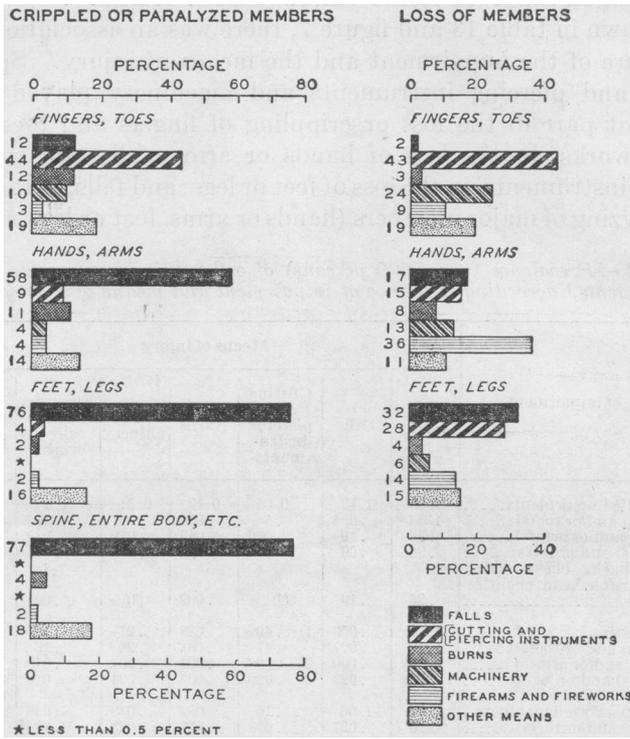


FIGURE 7.—Percentage distribution of specified orthopedic impairments due to home accidents, according to the means of injury.<sup>b</sup>

eyes) due to home accidents (83.1 per 100,000) was more than twice the female rate (34.5); (c) the rate of blindness in one eye was much greater (54.6) than the rate of blindness in both eyes (3.3).

TABLE 14.—Prevalence (per 100,000 persons) of blindness due to home accidents,<sup>a</sup> according to sex of persons observed<sup>b</sup>

Blindness	Both sexes	Male	Female	Number of cases, both sexes
One or both eyes.....	57.9	83.1	34.5	1,447
One eye.....	54.6	78.9	32.1	1,365
Both eyes.....	3.3	4.2	2.4	82

<sup>1</sup> Permanent effects of home accidents accumulated over the attained lifetime of living individuals in the population.

Home accidents caused 14 percent of all blindness (one or both eyes) enumerated in the survey and 34 percent of such blindness due to accidents (wherever the place of occurrence). In comparison with

all other accidents and in comparison with all other causes (disease, congenital, etc., but excluding accidents), home accidents were relatively more often a cause of blindness in one eye than in both eyes, as is shown in the following table:

Cause of blindness	Percentage distribution of persons blind in one or both eyes		
	One or both eyes	One eye only	Both eyes
Home accidents.....	100	94	6
All other accidents.....	100	91	9
All other causes (excluding accidents).....	100	71	29

#### SUMMARY

This report, the first of a series on accidents, summarizes data collected in the National Health Survey on serious home accidents among some 2,500,000 white and colored persons in over 700,000 families in 83 cities of the United States.<sup>24</sup> Because of the recognized impossibility of complete enumeration at a single visit of accidents occurring during the previous 12 months, certain of the rates given are believed to be somewhat below their true values.

*Frequency of disability.*—Among persons enumerated in the National Health Survey the annual frequency rate of accidents in the urban home which disabled for 1 week or more was 4.65 per 1,000 persons and contributed 29 percent of the total frequency rate for accidents (16.0 per 1,000 persons, all places of occurrence). The annual frequency rate of accidents in the home which disabled persons for a month or more within the 12-month period was 2.52 per 1,000 persons.

The annual number of days of disability from home accidents (disabling for 1 week or more) per person observed was 0.23, which is 31 percent of the total rate for accidents (0.75 days, all places of occurrence), and 2.3 percent of the total rate for all causes (10 days). The average duration of the disability within the 12-month period from home accidents disabling 1 week or more was 49 days.

*Sex and age.*—The annual frequency rate of home accidents (disabling for 1 week or more) for females was 1.4 times that for males, being 5.45 per 1,000 persons for the former and 3.78 for the latter. The rate (both sexes) decreased from 5.09 per 1,000 persons under 5 years of age to 2.38 for persons 15–24 years, and then rose rapidly with advancing age to 14.35 for persons 65 years and older. Also, the annual number of days of disability per person observed and the average length of periods of disability (within the 12 months) increased with advancing age.

<sup>24</sup> For data on accidents, all places of occurrence, based on 8 cities selected from the 83 covered in the National Health Survey, see Accidents as a cause of disability, preliminary reports, *Sickness and Medical Care Series*, Bull. 3, prepared by Arch B. Clark of the National Health Survey.

From infancy to age 25, more home accidents disabling for 1 week or more occurred among males than among females, but after age 25 the reverse was true. The rates were especially high among older females, reaching 9.11 per 1,000 in the age group 45 to 65 and 19.65 in the age group 65 years and older.

*Economic status.*—Persons in poor economic circumstances reported relatively more home accidents (disabling for 1 week or more) than did persons in the higher income brackets. The annual frequency rate was highest for persons in the relief group and declined with an increase in annual family income up to \$1,500. There was little difference in the rates for income groups above \$1,500. While the rates were highest among persons on relief at every age, the greatest excess occurred in the young adult period, 25–44 years of age, for which the relief rate was more than twice that for the highest income group.

*Amount of exposure.*—There are many factors reflected in the age-sex differentials in the rates, among which exposure, both in terms of time spent at home and amount and type of activity, is important. For persons under 25 the sex differential is undoubtedly due in part to the more hazardous activities of boys, while the change with age in the rates for each sex may reflect the varying amount of time spent at home during each age period.

A comparison of the rates for employed males, employed females, and housewives (ages 15–64) also brings out the influence of the amount of exposure on the rates for home accidents. The rates for female employed workers and for housewives exceeded those for male employed workers by 70 and 132 percent, respectively. Furthermore, although the rate for housewives was higher than the rate for employed female workers for every age group, the excess in the rate for housewives decreased progressively after age 25, undoubtedly reflecting not only a minimum of activity in the home on the part of young employed female workers but also the performance of fewer home duties by housewives after age 45. Another indication of the influence of the factor of exposure on the rates for serious home accidents is the comparatively high rate among employed female workers in the lower income groups, reflecting the performance of homemaking duties to a greater degree by these workers than by those in the higher income groups.

*Means of injury.*—Falls were the means of injury in 64 percent of home accidents (disabling 1 week or more), cutting and piercing instruments in 13 percent, burns in 8 percent, and other means of injury in 14 percent. For each age group the rate for falls was much higher than the rate for any other means of injury and largely determined the curve for all means of injury. The rate for burns was much higher for children than it was for adults, and after reaching a

minimum at about age 25 increased somewhat with advancing age. The variation by age was much less in the rates for cutting and piercing instruments than in the rates for the other means of injury.

The frequency rate of falls disabling for 1 week or more was slightly higher for males than for females under 15 years of age, and much higher for older females. In the case of burns the rates for males and for females were practically identical among children, but among adults the rates were very much greater for females than for males. For cutting and piercing instruments the male rates were very much higher than the female rates in the younger age groups; the rates in the older age groups did not differ particularly according to sex.

*Fractures.*—The annual frequency of home accidents (disabling for 1 week or more) which involved fractures was 1.55 per 1,000 persons. Fractures occurred in one-third of all such home accidents and in one-half of those ascribed to falls.

*Orthopedic impairments and blindness.*—The prevalence rate of orthopedic impairments (both loss of members and crippled or paralyzed members) due to home accidents was 2.88 per 1,000 persons, a figure which represents (for these impairments) the permanent effects of injury from home accidents over the attained lifetime of living individuals in the surveyed population. Unlike the annual frequency of home accidents (disabling for 1 week or more), the prevalence of orthopedic impairments due to home accidents was 30 percent higher among males than among females.

Loss of members accounted for 42 percent of orthopedic impairments due to home accidents; these losses were predominantly fingers and toes. Crippled or paralyzed members constituted the remaining 58 percent and were chiefly major, e. g., hands, feet, spine.

The prevalence rate of blindness (one or both eyes) due to home accidents was 57.9 per 100,000 persons; the rate for blindness in one eye was 54.6 and in both eyes, 3.3. The male rate for blindness (one or both eyes) due to home accidents was 83.1 and the female rate, 34.5.

#### DISCUSSION

More than 23,000 deaths occur annually<sup>25</sup> as a result of accidents in the home, or nearly 2 percent of all deaths in the United States and 23 percent of accidental deaths (all places of occurrence). Although outranked by certain major causes of death, home accidents are the cause of more deaths than diphtheria, scarlet fever, whooping cough, and measles combined; of more than appendicitis; of nearly as many

<sup>25</sup> Based on an average of the number of deaths occurring in the years 1935-38 as reported by the U. S. Bureau of the Census.

These deaths were distributed by means of injury as follows: Falls, 57 percent; burns, 19 percent; firearms, 4 percent; cutting and piercing instruments, 1 percent; and other means of injury, 18 percent.

deaths as diabetes; of over two-thirds as many deaths as automobile accidents; and of over a third as many deaths as tuberculosis.<sup>28</sup>

A further indication of the seriousness of home accidents is the frequency and amount of disability resulting from such accidents noted in the National Health Survey. Of special significance are the facts that a large proportion of these home accidents occurred among children and among adults in the most productive ages and that many of the persons surveyed had permanent orthopedic impairments or were blind as a result of home accidents.

The importance of the role of the housewife must be recognized in any attempt to reduce the number of home accidents. Not only do housewives themselves sustain one-third of all serious home accidents but an additional one-fourth occur among children (under age 15) for whom housewives have major responsibility.

Another point of attack is suggested by the relationship between low income and a high home accident rate. Although it was impossible to determine the proportionate effect of the many factors associated with low income, nevertheless it appears that certain specific housing conditions, such as dilapidation and faulty design, overcrowding, and poor household equipment, play a part.

The findings of this report indicate the public health importance of home accidents and suggest the need for more intensive studies of the specific causes, particularly from the point of view of developing methods of prevention. Although the complexities of the problem are recognized, its gravity makes consideration of it by health authorities a clear necessity of the future.

<sup>28</sup> Average annual numbers of deaths (based on number of deaths occurring in the years 1935-38 as reported by the U. S. Bureau of the Census) according to specified cause are as follows:

<i>Cause of death</i>	<i>Average for years 1935-38</i>	<i>Cause of death</i>	<i>Average for years 1935-38</i>
Home accidents.....	23, 738	Appendicitis.....	15, 566
Diphtheria.....	3, 040	Diabetes.....	30, 099
Scarlet fever.....	2, 060	Automobile accidents.....	34, 428
Whooping cough.....	4, 295	Tuberculosis.....	68, 667
Measles.....	2, 493		

#### REFERENCES TO TABLES AND CHARTS

(These references are to be considered as supplementary to the basic description of the National Health Survey technique and definitions which have been given in "Scope and method of a Nation-wide canvass of sickness in relation to its social and economic setting," by George St. J. Perrott, Clark Tibbitts, and Rollo H. Britten. Pub. Health Rep., 54: 1663 (1939).)

\* Includes a small number of cases with disability of less than 7 days, but which had hospital care or resulted in death.

<sup>b</sup> Based on 2,498,180 persons of known age in 83 cities, distributed by age and sex as follows:

	All ages	Under 5 years	5-9 years	10-14 years	15-24 years	25-44 years	45-64 years	65 years and over
Both sexes.....	2,498,180	175,653	202,770	224,391	446,369	820,826	485,762	142,409
Male.....	1,200,728	89,214	101,917	112,076	206,696	388,002	239,187	63,636
Female.....	1,297,452	86,439	100,853	112,315	239,673	432,824	246,575	78,773

• Excludes 14 home accidents (of a total of 11,622) unknown as to age of persons observed.

• Excludes 77 home accidents (of a total of 11,622) unknown as to age of persons observed and/or duration of disability.

• Rate for all incomes (including unknown) based on 2,498,180 persons of known age in 83 cities, distributed by age and income as follows:

	Under 5 years	5-9 years	10-14 years	15-24 years	25-44 years	45-64 years	65 years and over
All incomes (including unknown).....	175,653	202,770	224,391	446,369	820,826	485,762	142,409
Relief.....	46,431	53,059	57,126	83,038	119,426	71,497	22,087
Nonrelief:							
Under \$1,000.....	39,943	42,974	47,388	102,079	183,679	114,840	45,815
\$1,000 to \$1,500.....	39,739	44,423	47,021	93,358	189,221	97,902	26,002
\$1,500 to \$2,000.....	24,558	29,538	33,332	68,418	142,100	77,954	18,001
\$2,000 and over.....	21,086	27,814	33,291	77,147	155,518	100,659	23,347

Rates for persons of unknown income, based on 362 cases among 98,369 persons, are not shown.

<sup>f</sup> Rate for all incomes (including unknown) based on 2,498,180 persons of known age in 83 cities, distributed by sex and income as follows:

	Male	Female
All incomes (including unknown).....	1,200,728	1,297,452
Relief.....	221,925	230,739
Nonrelief:		
Under \$1,000.....	270,058	306,660
\$1,000 to \$1,500.....	261,372	276,294
\$1,500 to \$2,000.....	191,796	202,105
\$2,000 and over.....	210,620	228,242

Rates for persons of unknown income, based on 362 cases among 98,369 persons, are not shown.

• Based on persons 15-64 years of age, distributed by age and employment status as follows:

	Total 15-64 years	15-24 years	25-44 years	45-64 years
Employed male workers.....	547,384	74,458	305,120	167,806
Employed female workers.....	209,214	64,500	108,833	35,881
Housewives.....	504,166	49,223	276,294	178,649

<sup>h</sup> Based on females 15-64 years of age distributed by age and employment status as in footnote g.

† Based on females 15-64 years of age distributed by employment status, age, and income, as follows:

	Employed female workers				Housewives			
	Total 15-64 years	15-24 years	25-44 years	45-64 years	Total 15-64 years	15-24 years	25-44 years	45-64 years
All incomes.....	209, 214	64, 500	108, 833	35, 881	504, 166	49, 223	276, 294	178, 649
Relief.....	15, 356	5, 998	6, 946	2, 412	84, 186	10, 934	46, 501	26, 751
Nonrelief:								
Under \$1,000.....	57, 508	14, 532	30, 421	12, 555	119, 190	16, 589	59, 049	43, 552
\$1,000 to \$1,500.....	45, 506	14, 179	23, 912	7, 415	119, 889	12, 714	68, 537	38, 638
\$1,500 to \$2,000.....	37, 553	12, 549	19, 449	5, 555	87, 477	5, 600	51, 196	30, 691
\$2,000 and over.....	53, 291	17, 242	28, 105	7, 944	93, 424	3, 386	51, 011	39, 027

† Based on 504,166 housewives distributed by age and income as in footnote i.

\* Excludes home accidents unknown as to age of persons.

† Excludes cases unknown as to age of persons.

“All other means” here excludes machinery, and firearms and fireworks, whereas “All other means” in table 9 includes these categories.

“Based on 2,502,391 white and colored persons: 1,201,992 males and 1,300,399 females.

## COURT DECISION ON PUBLIC HEALTH

*Award under workmen's compensation act for pneumonia denied.*— (Missouri Supreme Court, Division No. 1; *Joyce et al. v. Luse-Stevenson Co. et al.*, 139 S.W.2d 918; decided March 6, 1940.) A proceeding under the Missouri Workmen's Compensation Act was brought to secure an award for the death of an employee from pneumonia. It appeared that in connection with the construction of a building the deceased, a plasterer, had been employed in putting concrete waterproofing material on the walls of a sub-basement and on certain pits and depressions below its floor. A considerable amount of seep water had gotten into the sub-basement, covering a large part of the floor thereof. Although a platform was provided for the workmen, it was necessary for them to get their feet and the lower portions of their legs wet. The deceased had worked above the water level for several weeks but he spent his last two working days in the sub-basement. He became acutely ill with pneumonia and his death ensued therefrom.

The compensation law defined accident as “An unexpected or unforeseen event happening suddenly and violently, with or without human fault and producing at the time objective symptoms of an injury.” Injury was defined as “violence to the physical structure of the body and such disease or infection as naturally results therefrom.” The law then provided that these terms should not include either occupational disease in any form or any contagious or infectious disease contracted during the course of the employment.

The supreme court had before it for decision the question whether there was an accident within the meaning of that term as used in the compensation act, and the view taken by it was that there was no such accident. After setting forth the definitions contained in the law the court said that the event which constituted an accident was thus clearly a happening or occurrence in part at least external to the body itself and that the physiological changes which may result in the workman's own body are consequences of the accidental event. It was stated that where, as in the instant case, the disease resulted from exposure in the ordinary course of the employee's work the weight of authority was to the effect that the disease was not compensable.

### DEATHS DURING WEEK ENDED OCTOBER 26, 1940

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Oct. 26, 1940	Correspond- ing week, 1939
<b>Data from 87 large cities of the United States:</b>		
Total deaths.....	7,991	7,787
Average for 3 prior years.....	7,944	-----
Total deaths, first 43 weeks of year.....	357,121	351,070
Deaths under 1 year of age.....	445	459
Average for 3 prior years.....	503	-----
Deaths under 1 year of age, first 43 weeks of year.....	21,318	21,235
<b>Data from industrial insurance companies:</b>		
Policies in force.....	64,801,951	66,574,186
Number of death claims.....	10,615	11,596
Death claims per 1,000 policies in force, annual rate.....	8.6	9.1
Death claims per 1,000 policies, first 43 weeks of year, annual rate.....	9.7	10.0

# PREVALENCE OF DISEASE

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*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring*

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## UNITED STATES

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REPORTS FROM STATES FOR WEEK ENDED NOVEMBER 2, 1940

### Summary

For the current week, slight increases over the preceding week were recorded for influenza, measles, meningococcus meningitis, scarlet fever, and whooping cough, and decreases for diphtheria, poliomyelitis, smallpox, and typhoid fever, while the incidence of influenza, measles, poliomyelitis, and whooping cough was slightly above the 5-year (1935-39) median expectancy.

For 1940 to date (44 weeks), the cumulative totals for only influenza and poliomyelitis are above the cumulative 5-year medians.

The States reporting the largest numbers of cases of influenza were South Carolina, with 331, and Texas, with 271. These States also reported the highest incidence in the immediately preceding weeks.

Current reports include 2 cases of undulant fever, 1 case of tularaemia (in Arizona), and 50 cases of endemic typhus fever, of which 20 occurred in Georgia and 13 in Texas. (Preliminary reports of diseases other than the 9 included in the weekly table do not include all of the States.)

For the current week the Bureau of the Census reports 7,967 deaths in 88 major cities of the United States, as compared with 8,074 for the preceding week and with a 3-year (1937-39) average of 7,852 for the corresponding week.

*Telegraphic morbidity reports from State health officers for the week ended November 2, 1940, and comparison with corresponding week of 1939 and 5-year median*

In these tables a zero indicates a definite report, while leaders imply that, although none were reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningit's, meningococcus		
	Week ended		Median, 1935-39	Week ended		Median, 1935-39	Week ended		Median, 1935-39	Week ended		Median, 1935-39
	Nov. 2, 1940	Nov. 4, 1939		Nov. 2, 1940	Nov. 4, 1939		Nov. 2, 1940	Nov. 4, 1939		Nov. 2, 1940	Nov. 4, 1939	
<b>NEW ENG.</b>												
Maine.....	1	0	1	1	-----	75	7	30	0	0	0	
New Hampshire.....	0	0	0	-----	-----	0	2	2	0	0	0	
Vermont.....	0	0	0	-----	-----	3	31	31	0	0	0	
Massachusetts.....	4	3	3	-----	-----	173	165	66	2	0	0	
Rhode Island.....	0	0	1	-----	-----	0	42	27	1	0	0	
Connecticut.....	0	2	2	-----	4	2	3	7	12	0	0	
<b>MID. ATL.</b>												
New York.....	11	18	22	10	13	110	200	162	128	0	2	5
New Jersey.....	7	18	11	4	6	12	134	6	17	0	1	1
Pennsylvania.....	15	33	36	-----	-----	-----	531	26	40	0	4	4
<b>E. NO. CEN.</b>												
Ohio.....	18	43	48	20	7	7	25	34	34	1	0	3
Indiana.....	7	33	33	5	7	28	9	10	10	1	2	2
Illinois.....	27	30	41	3	10	12	147	20	20	2	0	2
Michigan <sup>1</sup> .....	7	9	22	2	4	2	127	71	50	3	0	1
Wisconsin.....	1	1	2	27	24	24	205	33	33	1	0	0
<b>W. NO. CEN.</b>												
Minnesota.....	2	4	9	-----	7	1	9	28	16	1	1	0
Iowa.....	9	4	5	2	-----	-----	51	34	3	1	2	0
Missouri.....	19	13	23	5	-----	19	1	5	8	0	0	2
North Dakota.....	2	1	2	-----	-----	-----	4	1	1	1	0	0
South Dakota.....	1	0	3	-----	-----	-----	4	9	3	0	0	0
Nebraska.....	2	6	6	-----	4	1	9	1	3	0	0	0
Kansas.....	5	6	10	1	2	2	5	38	4	1	1	0
<b>SO. ATL.</b>												
Delaware.....	0	0	0	-----	-----	-----	3	3	3	0	0	0
Maryland <sup>1</sup> .....	3	16	10	2	7	4	6	6	17	0	0	1
Dist. of Col.....	1	2	5	-----	-----	-----	3	0	0	0	0	1
Virginia <sup>2</sup> .....	22	89	66	67	57	-----	20	4	28	1	0	2
West Virginia <sup>1</sup> .....	4	21	27	6	19	10	4	4	8	1	1	1
North Carolina <sup>1</sup> .....	49	165	142	4	2	4	6	110	101	0	0	3
South Carolina <sup>1</sup> .....	20	28	28	331	300	192	3	1	4	1	1	1
Georgia <sup>1</sup> .....	9	46	44	14	35	-----	2	1	1	2	2	1
Florida.....	7	11	19	1	2	2	1	14	14	0	1	0
<b>E. SO. CEN.</b>												
Kentucky.....	18	24	37	2	2	14	59	1	20	2	2	2
Tennessee <sup>1</sup> .....	9	32	32	6	11	27	5	6	3	0	0	2
Alabama <sup>1</sup> .....	12	39	41	14	70	46	5	0	4	5	1	1
Mississippi <sup>1</sup> .....	7	14	20	-----	-----	-----	-----	-----	-----	0	1	0
<b>W. SO. CEN.</b>												
Arkansas.....	10	19	25	23	51	48	2	2	2	0	0	1
Louisiana <sup>1</sup> .....	21	18	18	2	3	3	1	2	2	0	2	1
Oklahoma.....	19	22	22	31	33	33	0	1	2	0	0	1
Texas <sup>1</sup> .....	30	47	63	271	218	189	10	28	18	0	2	1
<b>MOUNTAIN</b>												
Montana.....	5	0	0	7	17	4	3	68	13	1	0	1
Idaho.....	1	0	0	5	-----	2	2	5	5	0	0	0
Wyoming.....	0	4	0	1	-----	-----	1	41	5	0	0	0
Colorado.....	2	7	7	7	13	-----	24	21	5	0	0	0
New Mexico.....	0	0	4	-----	1	1	6	2	8	0	0	0
Arizona.....	7	4	3	68	32	33	22	3	1	0	0	0
Utah <sup>1</sup> .....	0	2	1	4	-----	-----	3	12	12	0	1	1
Nevada.....	0	-----	-----	-----	-----	-----	0	-----	-----	0	-----	-----
<b>PACIFIC</b>												
Washington.....	6	5	2	-----	-----	-----	5	309	25	1	0	0
Oregon.....	3	0	2	17	15	17	6	24	9	0	2	0
California <sup>1</sup> .....	11	18	35	13	27	22	25	149	114	2	0	2
<b>Total</b> .....	<b>414</b>	<b>857</b>	<b>1,081</b>	<b>976</b>	<b>996</b>	<b>847</b>	<b>1,942</b>	<b>1,549</b>	<b>1,549</b>	<b>31</b>	<b>29</b>	<b>62</b>
<b>44 weeks</b> .....	<b>12,632</b>	<b>18,657</b>	<b>21,944</b>	<b>175,897</b>	<b>157,887</b>	<b>146,188</b>	<b>239,512</b>	<b>356,340</b>	<b>356,340</b>	<b>1,405</b>	<b>1,689</b>	<b>4,794</b>

See footnotes at end of table.

*Telegraphic morbidity reports from State health officers for the week ended November 8, 1940, and comparison with corresponding week of 1939 and 5-year median—*  
Continued

Division and State	Pollomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended		Me-dian, 1935-39	Week ended		Me-dian, 1935-39	Week ended		Me-dian, 1935-39	Week ended		Me-dian, 1935-39
	Nov. 2, 1940	Nov. 4, 1939		Nov. 2, 1940	Nov. 4, 1939		Nov. 2, 1940	Nov. 4, 1939		Nov. 2, 1940	Nov. 4, 1939	
<b>NEW ENG.</b>												
Maine.....	0	0	1	4	18	11	0	0	0	1	3	2
New Hampshire.....	0	0	0	1	2	3	0	0	0	0	0	0
Vermont.....	0	0	0	6	2	4	0	0	0	2	0	0
Massachusetts.....	3	2	2	80	69	103	0	0	0	2	0	1
Rhode Island.....	0	0	0	4	4	12	0	0	0	0	0	0
Connecticut.....	0	0	0	21	30	30	0	0	0	3	3	2
<b>MID. ATL.</b>												
New York.....	9	23	10	150	134	238	0	0	0	8	15	15
New Jersey.....	1	4	4	73	60	60	0	0	0	3	3	2
Pennsylvania.....	8	13	9	161	288	288	0	0	0	7	12	18
<b>E. NO. CEN.</b>												
Ohio.....	23	10	2	178	227	256	0	2	0	21	14	15
Indiana.....	11	5	2	43	129	129	1	3	3	1	4	4
Illinois.....	31	6	6	266	202	243	4	2	2	3	14	16
Michigan <sup>1</sup> .....	49	14	12	95	169	187	3	0	0	3	20	5
Wisconsin.....	36	3	3	121	125	140	0	0	3	1	0	1
<b>W. NO. CEN.</b>												
Minnesota.....	18	15	1	57	68	95	0	3	3	0	0	0
Iowa.....	21	21	6	66	54	70	0	8	8	2	0	1
Missouri.....	1	1	2	39	70	113	0	0	1	9	5	5
North Dakota.....	0	0	1	4	21	33	6	4	4	1	0	1
South Dakota.....	4	1	1	19	11	21	1	1	7	0	0	1
Nebraska.....	8	4	0	17	12	21	0	1	1	1	0	0
Kansas.....	12	2	2	60	64	99	0	1	1	2	3	2
<b>SO. ATL.</b>												
Delaware.....	0	1	0	7	7	6	0	0	0	0	1	1
Maryland <sup>1</sup> .....	1	2	2	41	44	51	0	0	0	4	5	8
Dist. of Col.....	0	0	0	8	10	10	0	0	0	1	1	1
Virginia <sup>1</sup> .....	12	1	1	53	38	49	0	0	0	5	2	8
West Virginia <sup>1</sup> .....	25	10	0	50	87	87	0	0	0	5	15	10
North Carolina <sup>1</sup> .....	3	0	1	78	96	85	0	0	0	3	5	8
South Carolina <sup>1</sup> .....	0	1	0	44	25	11	0	0	0	3	20	7
Georgia <sup>1</sup> .....	0	1	1	38	30	24	0	0	0	7	11	11
Florida.....	1	0	0	4	11	11	0	0	0	2	4	1
<b>E. SO. CEN.</b>												
Kentucky.....	5	16	2	65	50	82	0	0	0	22	14	14
Tennessee <sup>1</sup> .....	0	0	2	23	63	49	2	6	1	1	10	10
Alabama <sup>1</sup> .....	0	0	1	38	46	26	0	0	0	4	5	5
Mississippi <sup>1,2</sup> .....	0	0	1	14	9	18	0	0	0	4	0	6
<b>W. SO. CEN.</b>												
Arkansas.....	1	2	1	20	14	18	1	4	1	11	9	9
Louisiana <sup>1</sup> .....	7	0	0	8	4	11	2	0	0	6	3	7
Oklahoma.....	3	0	2	21	23	23	2	5	2	7	9	13
Texas <sup>1</sup> .....	2	8	3	37	28	66	0	2	2	9	14	29
<b>MOUNTAIN</b>												
Montana.....	3	0	0	13	26	31	0	0	3	4	1	1
Idaho.....	1	1	0	13	10	24	0	1	0	3	2	2
Wyoming.....	0	1	0	4	15	9	0	0	0	0	0	0
Colorado.....	2	6	1	9	31	35	1	6	2	3	3	4
New Mexico.....	0	3	2	4	8	13	0	0	0	1	2	11
Arizona.....	0	0	0	1	4	8	0	0	0	1	2	2
Utah <sup>1</sup> .....	3	5	1	4	19	19	0	0	0	0	3	0
Nevada.....	0			1		0				1		
<b>PACIFIC</b>												
Washington.....	15	1	1	25	38	38	1	0	3	2	1	3
Oregon.....	2	4	2	10	17	27	0	1	1	1	3	3
California <sup>1</sup> .....	9	20	11	62	147	149	1	5	0	2	18	7
<b>Total.....</b>	<b>330</b>	<b>207</b>	<b>153</b>	<b>2,160</b>	<b>2,659</b>	<b>3,002</b>	<b>25</b>	<b>55</b>	<b>65</b>	<b>182</b>	<b>259</b>	<b>318</b>
<b>44 weeks.....</b>	<b>8,713</b>	<b>6,452</b>	<b>6,452</b>	<b>133,540</b>	<b>133,725</b>	<b>187,431</b>	<b>2,114</b>	<b>8,965</b>	<b>8,861</b>	<b>8,581</b>	<b>11,630</b>	<b>12,939</b>

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended November 2, 1940, and comparison with corresponding week of 1939 and 5-year median—  
Continued

Division and State	Whooping cough— week ended		Division and State	Whooping cough— week ended	
	Nov. 2, 1940	Nov. 4, 1939		Nov. 2, 1940	Nov. 4, 1939
<b>NEW ENG.</b>			<b>SO. ATL.—continued</b>		
Maine.....	27	22	Georgia <sup>1</sup> .....	11	20
New Hampshire.....	8	0	Florida.....	10	12
Vermont.....	3	47	<b>E. SO. CEN.</b>		
Massachusetts.....	172	92	Kentucky.....	96	64
Rhode Island.....	16	9	Tennessee <sup>2</sup> .....	20	47
Connecticut.....	86	73	Alabama <sup>3</sup> .....	19	32
<b>MID. ATL.</b>			Mississippi <sup>1, 3</sup> .....		
New Ycrk.....	431	318	<b>W. SO. CEN.</b>		
New Jersey.....	129	97	Arkansas.....	57	6
Pennsylvania.....	754	330	Louisiana <sup>2</sup> .....	12	11
<b>E. NO. CEN.</b>			Oklahoma.....	12	0
Ohio.....	343	91	Texas <sup>2</sup> .....	86	34
Indiana.....	10	26	<b>MOUNTAIN</b>		
Illinois.....	173	172	Montana.....	0	0
Michigan <sup>2</sup> .....	279	122	Idaho.....	9	1
Wisconsin.....	174	118	Wyoming.....	2	0
<b>W. NO. CEN.</b>			Colorado.....	31	8
Minnesota.....	123	48	New Mexico.....	10	36
Iowa.....	42	16	Arizona.....	2	8
Missouri.....	23	24	Utah <sup>1</sup> .....	21	58
North Dakcta.....	28	36	Nevada.....	0	
South Dakota.....	6	5	<b>PACIFIC</b>		
Nebraska.....	13	2	Washington.....	53	5
Kansas.....	51	6	Oregon.....	8	33
<b>SO. ATL.</b>			California <sup>2</sup> .....	300	89
Delaware.....	32	7	Total.....	4, 095	2, 284
Maryland <sup>1</sup> .....	87	31	44 weeks.....	139, 068	152, 382
Dist. of Col.....	11	15			
Virginia <sup>1</sup> .....	87	12			
West Virginia <sup>2</sup> .....	50	22			
North Carolina <sup>1</sup> .....	141	68			
South Carolina <sup>2</sup> .....	37	10			

<sup>1</sup> New York City only.

<sup>2</sup> Period ended earlier than Saturday.

<sup>3</sup> Typhus fever, week ended Nov. 2, 1940, 50 cases, as follows: Virginia, 1; North Carolina, 1; South Carolina, 2; Georgia, 20; Tennessee, 1; Alabama, 6; Mississippi, 3; Louisiana, 2; Texas, 13; California, 1.

## WEEKLY REPORTS FROM CITIES

City reports for week ended October 19, 1940

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Data for 60 cities: 5-year average	174	74	25	273	419	671	4	329	48	866	-----
Current week <sup>1</sup>	77	59	12	491	240	526	4	285	34	1,176	-----
Maine:											
Portland	0		0	0	1	0	0	0	0	2	30
New Hampshire:											
Concord	0		0	0	1	0	0	0	0	0	8
Manchester	0		0	0	0	6	0	1	0	0	16
Nashua	0		0	0	2	1	0	0	0	0	12
Vermont:											
Barre											
Burlington	0		0	0	0	0	0	0	0	0	6
Rutland	0		0	0	0	0	0	0	0	0	2
Massachusetts:											
Boston	0		0	24	4	13	0	8	3	75	204
Fall River	1		0	0	1	9	0	1	0	4	27
Springfield	0		0	0	0	3	0	3	0	3	34
Worcester	0		0	45	4	1	0	0	0	0	39
Rhode Island:											
Pawtucket	0		0	0	0	0	0	0	0	0	16
Providence	1		0	1	2	0	0	2	0	5	57
Connecticut:											
Bridgeport	0		0	0	0	2	0	0	0	0	28
Hartford	0		0	0	1	1	0	0	0	0	38
New Haven	0	1	0	0	1	3	0	1	0	35	45
New York:											
Buffalo	0		1	5	3	4	0	3	0	8	116
New York	10	2	0	67	48	41	0	45	3	152	1,388
Rochester	0		0	0	0	6	0	1	0	19	45
Syracuse	0		0	0	2	0	0	1	0	2	45
New Jersey:											
Camden	0		0	22	0	7	0	0	0	1	29
Newark	0		0	3	3	4	0	7	0	13	94
Trenton	0		0	3	1	3	0	0	0	2	33
Pennsylvania:											
Philadelphia	0		0	156	7	34	0	17	7	104	369
Pittsburgh	0	4	2	2	7	15	0	6	2	18	163
Reading	0		0	1	2	0	0	0	0	31	20
Scranton	0			0		0				0	
Ohio:											
Cincinnati	9		0	0	2	7	0	8	0	13	133
Cleveland	0	14	0	2	10	16	0	8	1	72	193
Columbus	0		0	0	2	4	0	2	0	20	83
Toledo	0		0	1	0	8	0	4	0	6	56
Indiana:											
Anderson	0		0	0	0	6	0	1	0	0	7
Fort Wayne	0		0	0	1	0	0	0	1	4	21
Indianapolis	3		0	1	4	9	0	3	0	11	81
Muncie	2		0	0	1	9	0	0	0	0	13
South Bend	0		0	1	0	0	0	1	0	0	24
Terre Haute	0		0	0	1	0	0	0	1	0	20
Illinois:											
Alton	0		0	0	0	1	0	0	0	0	8
Chicago	5	3	1	42	21	74	0	35	2	85	647
Elgin	0		0	0	2	0	0	0	0	2	10
Moline	0		0	0	0	0	0	0	0	0	14
Springfield	0		0	1	2	1	0	0	0	9	28
Michigan:											
Detroit	2	1	0	65	6	45	0	16	0	127	213
Flint	0		0	0	3	2	0	0	0	10	31
Grand Rapids	0		0	2	0	9	0	0	0	33	24
Wisconsin:											
Kenosha	0		0	1	0	0	0	0	0	2	8
Madison	0		0	0	0	0	0	0	0	4	15
Milwaukee	0		0	9	3	17	0	0	0	19	96
Racine	0		0	0	0	7	0	0	0	1	12
Superior	0		0	1	0	0	0	1	1	0	9

<sup>1</sup> Figures for Barre estimated; report not received.

## City reports for week ended October 19, 1940—Continued

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
Minnesota:											
Duluth.....	0		0	0	1	2	3	0	0	0	18
Minneapolis.....	0		0	0	4	13	0	1	1	13	88
St. Paul.....	0		0	0	3	8	0	1	0	6	57
Iowa:											
Cedar Rapids.....	0			0		2	0		0	0	
Davenport.....	0			0		2	0		0	0	
Des Moines.....	2		0	0	0	6	0	0	0	0	21
Sioux City.....	0			0		1	0		0	3	
Waterloo.....	0			0		4	0		0	0	
Missouri:											
Kansas City.....	2		0	0	1	2	0	5	1	5	90
St. Joseph.....	0		0	0	2	1	0	1	0	0	22
St. Louis.....	4		0	2	7	11	0	3	1	23	157
North Dakota:											
Fargo.....	0		0	0	1	0	0	0	0	6	14
Grand Forks.....	0			0		0	0		0	5	
Minot.....	0			0		0	0		0	0	
South Dakota:											
Aberdeen.....	0			0		1	0		0	0	
Nebraska:											
Lincoln.....	1			0		4	1		0	0	
Omaha.....	1		0	1	2	10	1	2	0	1	40
Kansas:											
Lawrence.....	0		0	0	0	0	0	0	0	0	1
Topeka.....	0		0	0	1	15	0	0	0	1	9
Wichita.....	0		0	1	5	1	0	1	0	9	22
Delaware:											
Wilmington.....	1		0	2	4	0	0	1	0	8	28
Maryland:											
Baltimore.....	2	1	0	2	3	10	0	8	2	66	185
Cumberland.....	0	1	0	0	0	2	0	0	0	0	19
Frederick.....	0		0	0	0	0	0	0	1	2	7
Dist. of Col.:											
Washington.....	0	2	2	0	6	14	0	16	0	2	169
Virginia:											
Lynchburg.....	2		0	0	0	1	0	0	0	3	9
Norfolk.....	0	1	0	0	3	1	0	1	0	0	25
Richmond.....	1		1	1	0	1	0	2	1	0	54
Roanoke.....	0		0	9	1	0	0	1	0	10	19
West Virginia:											
Charleston.....	0		0	0	0	1	0	1	1	0	17
Wheeling.....	0		0	0	1	0	0	0	0	2	17
North Carolina:											
Gastonia.....	0			0		0	0		0	0	
Raleigh.....	1		0	0	0	0	0	1	0	0	17
Wilmington.....	3		0	0	0	0	0	2	0	0	14
Winston-Salem.....	0		0	1	3	2	0	0	0	12	18
South Carolina:											
Charleston.....	0	7	1	0	0	0	0	0	0	0	18
Florence.....	3	19	0	2	1	0	0	0	0	2	4
Greenville.....	0		0	0	0	1	0	0	0	0	5
Georgia:											
Atlanta.....	2	6	0	1	1	17	0	7	0	1	95
Brunswick.....	0		0	0	1	0	0	1	0	0	5
Savannah.....	0	4	0	0	1	1	0	1	0	1	35
Florida:											
Miami.....	0	1	0	0	2	1	0	0	0	0	26
Tampa.....	1		0	0	0	0	0	0	0	1	18
Kentucky:											
Ashland.....	0		0	0	0	0	0	1	0	0	12
Covington.....	0		0	3	0	2	0	2	0	0	17
Lexington.....	0		0	9	0	0	0	0	0	4	12
Louisville.....	0		0	1	4	18	0	0	0	13	75
Tennessee:											
Knoxville.....	0		0	0	1	3	0	1	0	3	23
Memphis.....	1		0	0	1	9	0	1	0	7	71
Nashville.....	0		0	1	3	3	0	2	0	10	41
Alabama:											
Birmingham.....	3	4	0	3	4	3	0	1	1	0	53
Mobile.....	0		0	0	1	0	0	3	0	0	23
Montgomery.....	0			0		2	0		0	0	

## City reports for week ended October 19, 1940—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
<b>Arkansas:</b>											
Fort Smith.....	1			0		1	0		0		
Little Rock.....	0		0	0	1	0	0	1	0		
<b>Louisiana:</b>											
Lake Charles.....	1		0	0	1	1	0	0	0		6
New Orleans.....	2	2	0	0	0	3	0	10	0		136
Shreveport.....	4		0	0	0	2	0	1	0		20
<b>Oklahoma:</b>											
Oklahoma City.....	1		0	0	3	9	0	0	0		38
Tulsa.....	1		0	0	0	3	0	1	1		24
<b>Texas:</b>											
Dallas.....	3	1	1	0	0	3	0	1	0		59
Fort Worth.....	0		0	0	0	0	0	1	1		30
Galveston.....	0		0	0	0	0	0	0	0		13
Houston.....	1		1	0	5	3	0	5	0		84
San Antonio.....	0		0	0	3	4	0	6	0		48
<b>Montana:</b>											
Billings.....	0		0	0	2	1	0	0	0		6
Great Falls.....	1		0	0	1	0	0	0	0		9
Helena.....	0		0	0	0	1	0	0	0		4
Missoula.....	0		0	0	1	2	0	0	0		8
<b>Idaho:</b>											
Boise.....	0		0	0	1	0	0	0	0		11
<b>Colorado:</b>											
Colorado Springs.....	0		0	1	0	0	0	3	0		9
Denver.....	4		0	2	5	1	0	4	0		84
Pueblo.....	0		0	0	2	0	0	0	0		9
<b>New Mexico:</b>											
Albuquerque.....	0		0	0	1	0	0	4	2		20
<b>Utah:</b>											
Salt Lake City.....	0		0	1	0	0	0	0	1		32
<b>Washington:</b>											
Seattle.....	5		0	1	1	6	0	1	0		72
Spokane.....	0		0	0	2	7	0	0	1		32
Tacoma.....	0		0	2	1	4	0	1	0		38
<b>Oregon:</b>											
Portland.....	3	2	0	2	4	2	0	2	0		63
Salem.....	0		0	0		0	0	0	0		
<b>California:</b>											
Los Angeles.....	2	5	2	6	3	16	0	12	1		277
Sacramento.....	0		0	0	4	2	0	2	0		29
San Francisco.....	0	1	0	1	8	7	0	10	1		153

State and city	Meningitis, meningococcus		Poliomyelitis cases	State and city	Meningitis, meningococcus		Poliomyelitis cases
	Cases	Deaths			Cases	Deaths	
New York:				Missouri:			
New York.....	0	0	5	Kansas City.....	0	0	2
New Jersey:				St. Joseph.....	0	0	3
Camden.....	0	0	1	St. Louis.....	0	0	1
Newark.....	0	0	2	Nebraska:			
Trenton.....	0	0	2	Omaha.....	0	0	1
Pennsylvania:				Kansas:			
Philadelphia.....	0	0	2	Topeka.....	0	0	3
Ohio:				Virginia:			
Cincinnati.....	0	0	8	Lynchburg.....	1	0	1
Cleveland.....	0	0	1	Roanoke.....	0	0	1
Indiana:				Kentucky:			
Fort Wayne.....	0	0	1	Louisville.....	0	0	2
Indianapolis.....	0	0	1	Alabama:			
South Bend.....	0	0	2	Birmingham.....	0	0	1
Illinois:				Louisiana:			
Chicago.....	0	0	16	New Orleans.....	0	0	1
Michigan:				Shreveport.....	0	0	1
Detroit.....	0	0	2	Oklahoma:			
Grand Rapids.....	0	1	5	Oklahoma City.....	0	0	2
Wisconsin:				Colorado:			
Madison.....	0	0	3	Denver.....	0	0	1
Racine.....	0	0	2	New Mexico:			
Minnesota:				Albuquerque.....	0	0	1
Minneapolis.....	0	0	1	Utah:			
St. Paul.....	0	0	4	Salt Lake City.....	0	0	1
Iowa:				Washington:			
Davenport.....	0	0	1	Seattle.....	0	0	2
Des Moines.....	0	0	3	Tacoma.....	0	0	1
Waterloo.....	0	0	1	California:			
				Los Angeles.....	0	0	5
				Sacramento.....	0	0	1
				San Francisco.....	0	0	1

*Pellagra*.—Cases: Charleston, S. C., 2; Atlanta, 1; Savannah, 1; Birmingham, 1; Montgomery, 1; Albuquerque, 1; San Francisco, 1.

*Rabies in man*.—Deaths: Providence, 1.

*Typhus fever*.—Cases: New York, 1; Savannah, 3; Miami, 1; Mobile, 1; Montgomery, 2; Lake Charles, 1; Fort Worth, 1; Houston, 2.

# FOREIGN REPORTS

## CANADA

*Provinces—Communicable diseases—Weeks ended September 28 and October 5, 1940.*—During the weeks ended September 28 and October 5, 1940, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

### *Week ended September 28, 1940*

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis					1		1			2
Chickenpox		9		46	100	14	16	13	36	234
Diphtheria			2	33		3		1		39
Dysentery				5	1					6
Influenza		29	1		5					92
Lethargicencephalitis							1			1
Measles		3	2	23	93	49	12	12	41	235
Mumps		3	1	3	74	11			15	107
Pneumonia		8			7	1			5	21
Poliomyelitis				5	4	1				10
Scarlet fever			2	72	88	14		4	8	191
Smallpox							3			7
Tuberculosis		4	7	60	32	3	3			109
Typhoid and paratyphoid fever	1	1	4	28	13	5	5	1	2	60
Whooping cough		6	26	174	102	17	9	26	2	362

### *Week ended October 5, 1940*

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis					2					2
Chickenpox				52	97	23	39	7	29	247
Diphtheria		11	2	19	8	2	6	6		64
Dysentery				1	6		1			10
Influenza	4	17			10				14	45
Measles		6		56	153	57	72	48	13	405
Mumps				9	73	9	1	1	8	101
Pneumonia	1	4			7	1			3	16
Poliomyelitis				4	12					16
Scarlet fever		8		54	99	16	14	24	10	225
Smallpox							1			1
Trachoma									1	1
Tuberculosis		4	7	76	33	95	46			261
Typhoid and paratyphoid fever			4	49	9	5			2	69
Whooping cough				52	119	29	21	26	36	282

## FINLAND

*Communicable diseases—4 weeks ended August 10, 1940.*—During the 4 weeks ended August 10, 1940, cases of certain communicable diseases were reported in Finland as follows:

Disease	Cases	Disease	Cases
Diphtheria.....	181	Poliomyelitis.....	128
Dysentery.....	33	Scarlet fever.....	239
Influenza.....	785	Typhoid fever.....	27
Paratyphoid fever.....	279		

## HAWAII

*Influenza.*—For the week ended November 1, 1940, a total of 2,194 cases of influenza, with 1 death, was reported in the Territory of Hawaii. The disease was stated to be epidemic on September 26. Since that date, cases and deaths have been reported as follows:<sup>1</sup>

	Week ended—				
	Oct. 4	Oct. 11	Oct. 18	Oct. 25	Nov. 1
Cases.....	1,800	2,498	1,532	1,585	2,194
Deaths.....	2	4	0	0	1

## PANAMA CANAL ZONE

*Notifiable diseases—July–September 1940.*—During the months of July, August, and September, 1940, certain notifiable diseases were reported in the Panama Canal Zone and terminal cities as follows:

Disease	July		August		September	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chickenpox.....	7	—	4	—	5	—
Diphtheria.....	7	1	6	—	10	—
Dysentery (amoebic).....	11	2	11	1	6	—
Dysentery (bacillary).....	5	1	1	—	1	1
Leprosy.....	1	1	—	1	—	—
Malaria.....	374	10	191	4	138	2
Measles.....	16	—	1	—	3	—
Meningitis, meningococcus.....	—	—	4	—	1	1
Mumps.....	1	—	—	—	1	—
Paratyphoid fever.....	5	—	38	—	3	—
Pneumonia.....	—	17	—	36	—	31
Tuberculosis.....	—	24	—	44	—	24
Typhoid fever.....	2	2	1	—	—	—
Whooping cough.....	3	—	—	—	1	—

<sup>1</sup> See Public Health Reports, Oct. 25, 1940, p. 1972.

<sup>2</sup> In the Canal Zone only.

**REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND  
YELLOW FEVER RECEIVED DURING THE CURRENT WEEK**

NOTE.—A cumulative table giving current information regarding the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS of October 25, 1940, pages 1973-1976. A similar table will appear in future issues of the PUBLIC HEALTH REPORTS for the last Friday of each month.

**Cholera**

*China*.—During the week ended October 19, 1940, cases of cholera were reported in China as follows: Hong Kong, 6; Macao, 25; Shanghai, 20.

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